OCTOBER 25, 1954

New PRR Express Terminal . . . p. 18

RAILWAY AGE

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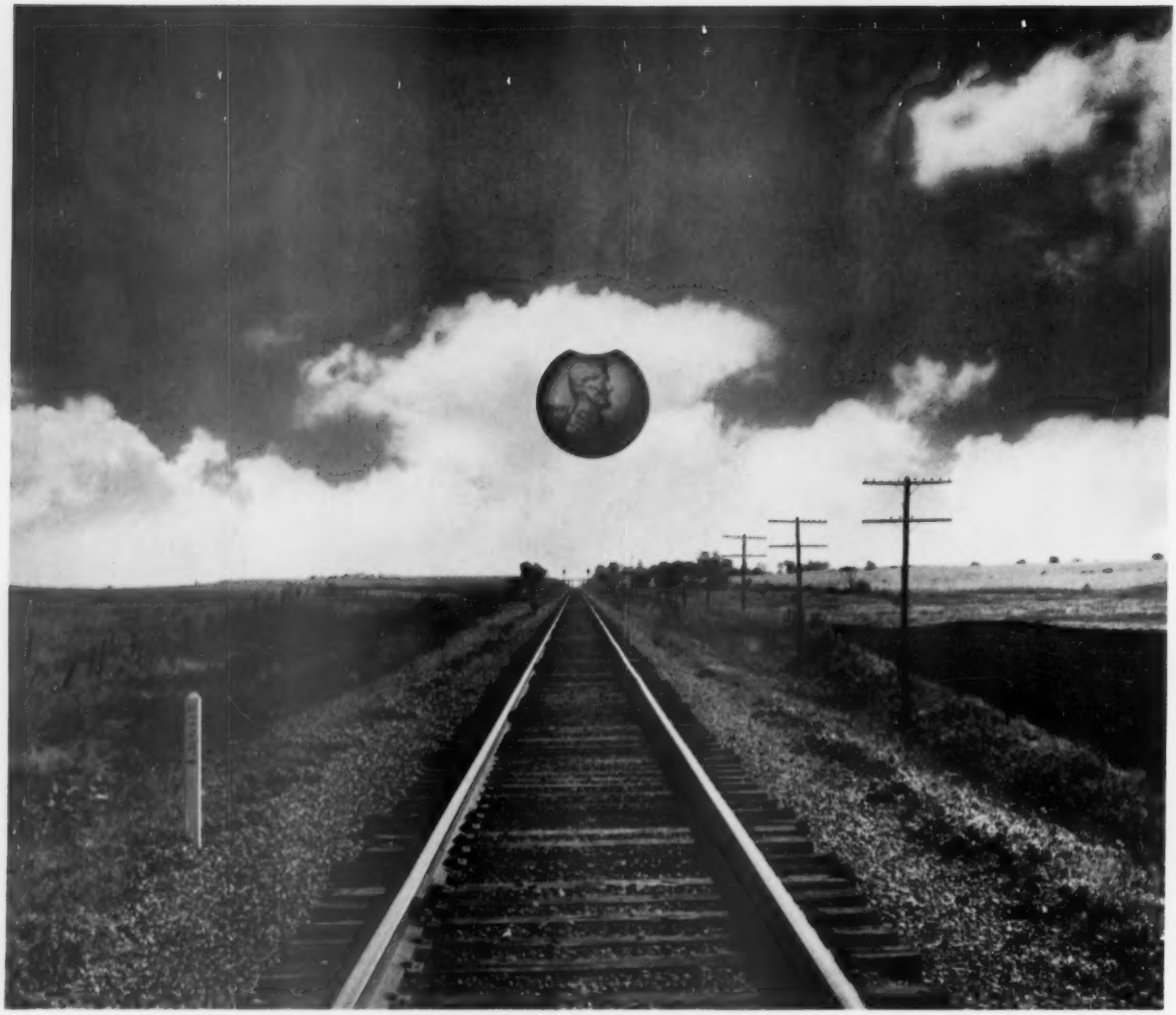
What a Railroad President Does

Why Cotton Belt Installed CTC

Railroads "Steal the Show" at Indiana State Fair

"We Must Plan for Survival"—Budd

How Boost Passenger Business?



under 1¢ a mile

That is the repair parts cost record established by the Fairbanks-Morse 2400-Horsepower Opposed-Piston engines in railroad service. That's the meaning of 40% fewer parts in the O-P.

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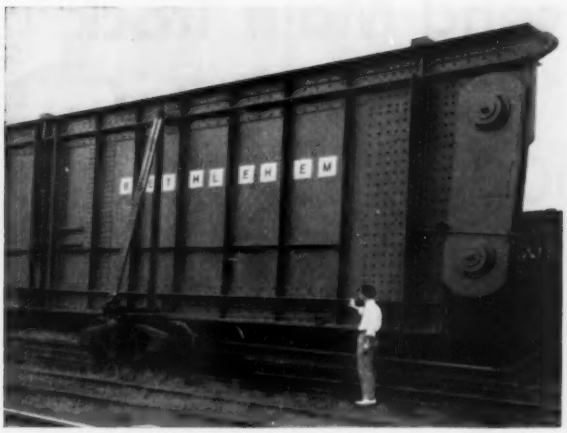
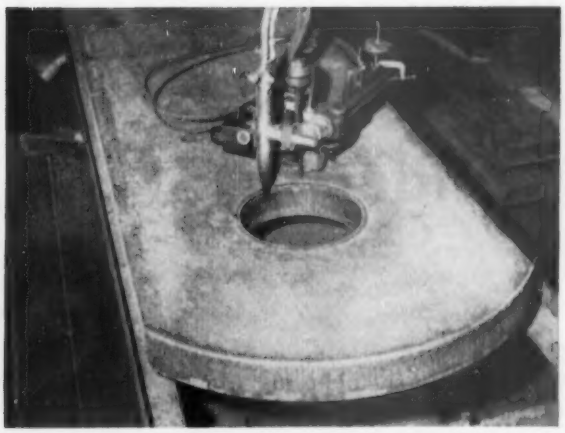
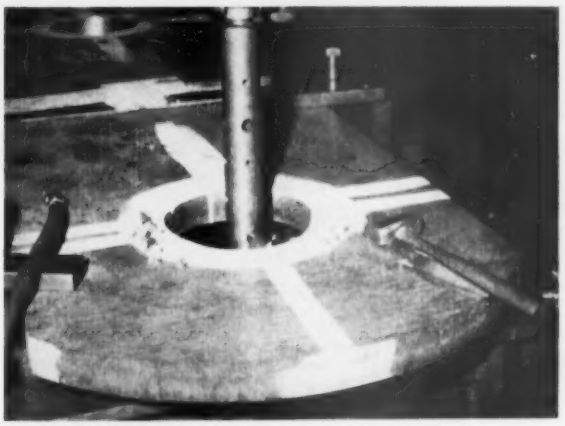


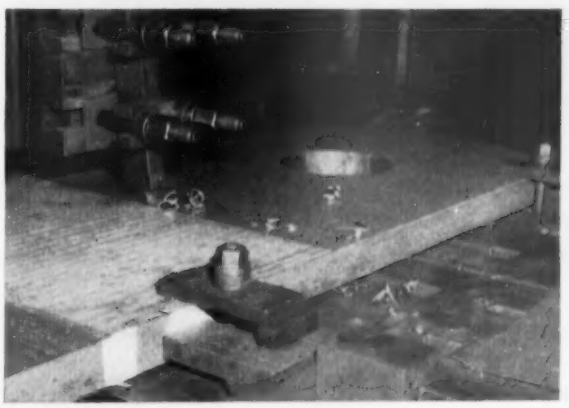
Eight of these hanger-links (extreme right) were fabricated by Bethlehem, using 3-in. Mayari-R plate. For clearance en route, girders were shipped on car trucks, instead of conventional mounting on flat car floors.



Burning the pin holes. Flame-cutting was also used to round the ends.



Boring the pin holes to finished size for 12-in. diam hanger pins.



Planing the surface of the hanger to conform to angle formed between two connecting girders.

Bridge hanger-links show workability of Mayari-R steel

Railroad men will find a convincing demonstration of Mayari R's workability in the hanger-links for the Passaic River Bridge, on the New Jersey Turnpike. These hanger-links are located at each end of the 990-ft continuous girder, connecting it to the approach spans.

Flame-cutting was used to round off the ends, and for burning the holes for the 12-in. hanger pins. A boring operation was employed to machine the holes to exact diameter.

Planing came into the picture, too. Because of a slight curvature in the bridge, the adjoining girders came together at an angle of 1 deg, 5 min, 14 sec, which of course meant that the hanger pins had to be out of parallel. Thus it was necessary to plane the hangers in such a way that both the upper and lower portions would bear evenly against the respective girders.

All these operations were accomplished as readily with Mayari R as they would have been with structural carbon steel. And Mayari R can be worked easily in other ways—riveting, cold-forming, hot-forming, shearing, punching. Its use in railroad applications is spreading rapidly, such as cars, locomotives, bridges, wayside structures. Our new Catalog 353 gives more details. Get a copy from the nearest Bethlehem office.

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*Here's the Record**

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2. 1.45 miles of siding abandoned.
3. 10.25 miles of second main converted to siding.

And the following additional advantages were effected:

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3. Increased safety of train movements.
4. Provided an annual return:

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On Total Cost	18.8%

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NEW MOVIE AVAILABLE entitled, *"AT THIS MOMENT"*—showing a vivid story of modern railroad progress. Length 26 minutes, on 16 mm. color sound film. For use of film write: United World Films, Inc., 1445 Park Ave., New York or Association Films, Inc., 347 Madison Ave., New York.

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RAILWAY AGE

October 25, 1954 Vol. 137, No. 17

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Week at a Glance

"Get new business," IC Commissioner Clarke advised railroads in an October 22 speech at Seattle. His views on industry vs. company welfare, and on rates vs. service, are of special interest in view of the speech by John Budd reported on page 7, and of our editorial comment on page 17. 8

There were no state-paid highway maintenance crews to assume the expense, or do the work of picking up, after "Hurricane Hazel," which cost U. S. and Canadian railroads, directly or indirectly, millions of dollars. 8

Another chance to test knowledge of Car Service Rules is provided by the "quiz" which appears on this week's "Question and Answer" page. 15

FORUM: "Ain't nobody here but us chickens" — that old, but familiar, saying pretty well summarizes one of the arguments truckers are using in trying to keep railroad rate making from being put on a realistic, competitive basis. 17

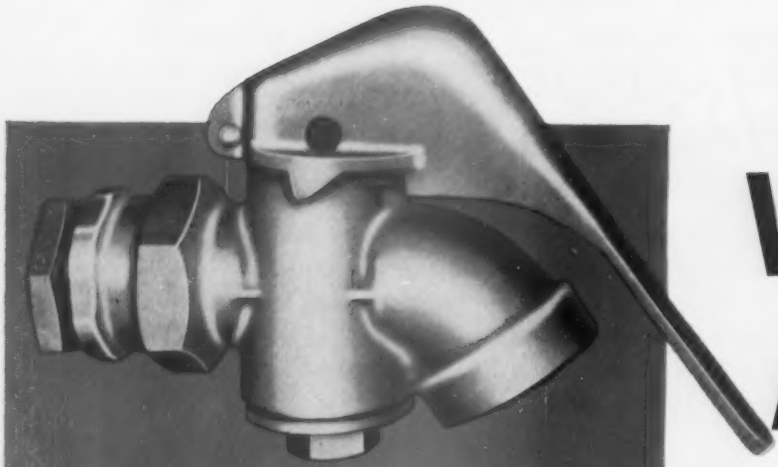
The latest in express terminals is the new, highly mechanized facility recently opened by REA in Philadelphia. 18

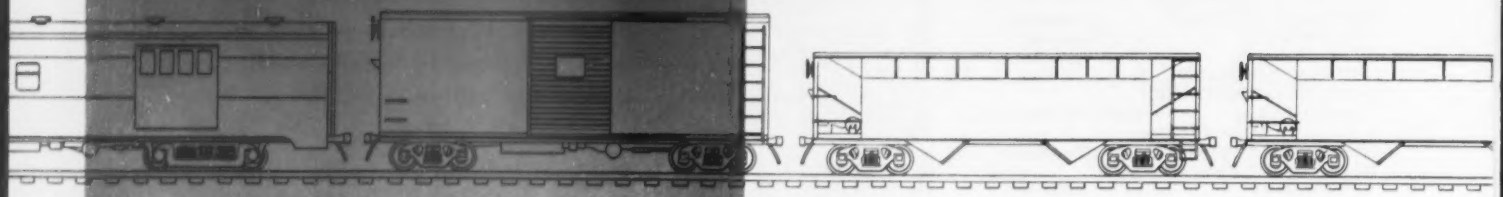
What does a president do? Another article in the series on "Contemporary Railroad Management" gives the answer—with the job of the Frisco's Clark Hungerford as a case study. 22

Railroads "stole the show" at last month's Indiana state fair, where two of the Eastern railroads' newly organized "community committees" cooperated to stage an exhibit that proved to be an outstanding attraction. 29

Why the Cotton Belt installed CTC: To increase capac-

Stop those air leaks with new WABCOSEAL® Angle Cocks

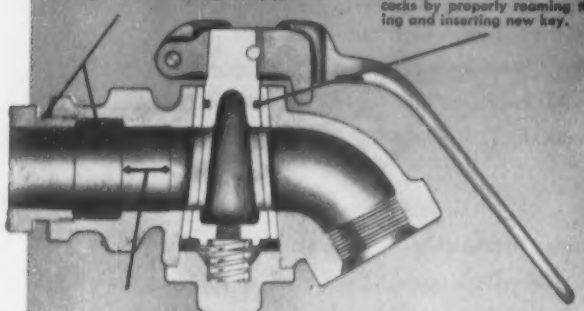




FOR FREIGHT CARS:

Wabco compression ring grips pipe when nut is tightened to provide tight seal and strong clamping action.

"O" ring seals the key effectively through a wide degree of key wear. This seal can be used on old angle cocks by properly reaming the bushing and inserting new key.



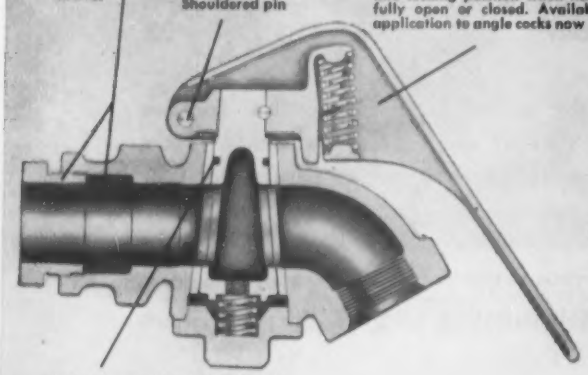
Brake pipe nipple length can fall anywhere within this range and still be perfectly sealed. Threaded nipple is not necessary but can be used if more convenient.

FOR PASSENGER CARS AND LOCOMOTIVES:

New Wabcoseal fitting is same as for freight car angle cock shown above.

Shouldered pin

Strong spring is compressed when handle is raised. Socket is snapped into locking position when handle is fully open or closed. Available for application to angle cocks now in use.



Sealed key is identical to freight car angle cock key shown above.

DON'T tolerate a high air leakage rate on your trains. Use the new Wabcoseal Angle Cocks for tighter seals.

The sealed key is new, with an "O" ring seal that stays tight through a wide range of key wear.

The brake pipe connection is new. A rugged Wabco compression ring replaces the old tapped thread. Tolerance for length of pipe nipple is now provided.

The spring-locking handle is new for passenger cars and locomotives. When the handle is removed to fully open or closed position a strong spring snaps the socket into locked position and keeps it there. A shouldered pin provides proper freedom of handle movement.

The sealed key and spring-locking handle are available for application to present angle cocks. See your Westinghouse Air Brake representative for more information.

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Current Statistics

Operating revenues, eight months	
1954	$ 6,193,871,103
1953	7,177,986,817
Operating expenses, eight months	
1954	$ 4,939,611,628
1953	5,413,836,296
Taxes, eight months	
1954	$ 583,988,932
1953	862,092,653
Net railway operating income, eight months	
1954	$ 500,409,102
1953	744,877,972
Net income, estimated, eight months	
1954	$ 337,000,000
1953	571,000,000
Average price railroad stocks	
October 19, 1954	71.40
October 20, 1953	58.41
Carloadings, revenue freight	
Forty-one weeks, 1954	26,456,248
Forty-one weeks, 1953	30,683,030
Average daily freight car surplus	
October 16, 1954	46,268
October 17, 1953	6,532
Average daily freight car shortage	
October 16, 1954	2,126
October 17, 1953	4,582
Freight cars on order	
October 1, 1954	11,993
October 1, 1953	42,198
Freight cars delivered	
September 1954	2,566
September 1953	5,706

RAILWAY AGE IS A MEMBER OF ASSOCIATED BUSINESS PUBLICATIONS (A.B.P.) AND AUDIT BUREAU OF CIRCULATION (A. B. C.) AND IS INDEXED BY THE INDUSTRIAL ARTS INDEX, THE ENGINEERING INDEX SERVICE AND THE PUBLIC AFFAIRS INFORMATION SERVICE. RAILWAY AGE INCORPORATES THE RAILWAY REVIEW, THE RAILROAD GAZETTE, AND THE RAILWAY AGE GAZETTE.

Departments

Competitive Transport	11
Equipment & Supplies	43
Figures of the Week	11
Financial	13
Forum	17
Freight Operating Statistics	50
From the ICC	8
Labor & Wages	9
Law & Regulation	9
Operations	8
Organizations	12
People in the News	9
Public Relations	7
Questions and Answers	15
Railway Officers	46
Rates & Fares	10
Securities	13
Supply Trade	43
Traffic	12

Week at a Glance CONTINUED

ity of 429 miles of busy single track, at less cost than double-tracking. 31

Power where it's needed most is provided by mobile and portable generating units now being made available by General Motors' Electro-Motive Division. 33

How boost passenger business? That was the central theme of the recent Pasadena meeting of the AAPTO. 36

Shippers told what they want when advisory boards held their national meeting at Louisville. It's enough cars of the right kind; fast and dependable LCL service; better results from the clean car program. 38

Lightweight trains — and more CTC — for the New York Central were announced by President Perlman in a talk made just as this issue was going to press. 43

BRIEFS

Bus lines were losing passengers faster than railroads in this year's first six months. They carried 11.2% fewer travelers than in 1953's first half. The comparable railroad loss was 5.1%.

Alleghany Corporation plans to increase its railroad holdings to at least 75% of its total portfolio. It has so advised the ICC in defending its claim to carrier status against opposition of the Securities & Exchange Commission.

"Ladies Day" on the Chicago & Eastern Illinois — a travel promotion plan whereby women may make a round-trip from home to Chicago on Tuesdays for the one-way fare—reached its first birthday the other day. Coffee and birthday cake were served to the ladies on two streamliners to mark the anniversary. During its first year, some 4,000 reduced fare tickets were sold under the plan.

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SINGLE ACTION *Twin Cushions*

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Interchangeable because it fits any A.A.R. standard yoke

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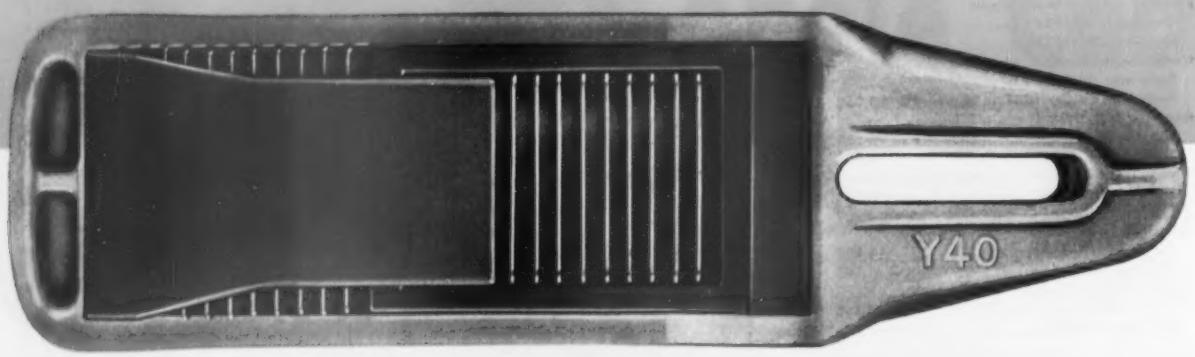
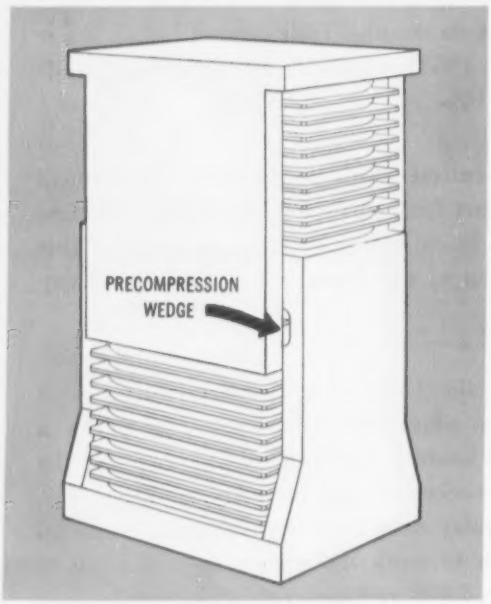


and because it is PRECOMPRESSED

it is easily applied to the car without the use of special jigs or fixtures



THE FIRST IMPACT RELEASES
THE PRECOMPRESSION WEDGES

New Waughmat Single Action Twin Cushion WM-DC-5 consists of . . . 1 Housing—1519, 5 Waughmats—6480, 4 Dividing Plates—6480, 5 Waughmats—6458, 4 Dividing Plates — 6458 . . . completely assembled ready for application to any of the following A · A · R standard yokes: Rigid Shank Coupler Yoke (Y40)—Swivel Yoke (Y30)—Type F Interlocking Coupler Yoke (Y45)—Horizontal or Farlow Yoke.

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51,600 ft. lbs.

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"We Must Plan for Our Survival"

Railway chief executives must seek and achieve unity of purpose and action to assure continuation of their industry, John Budd warns

John Budd, president of the Great Northern, has asked his fellow chief executive officers to give "diligent, searching thought to the word survival" for the American railway industry. "It is of the greatest urgency that we do so, and that we dedicate ourselves to seeking and achieving a unity of purpose and action in our common responsibility to assure survival of the railway industry, and through that the survival of individual companies."

Mr. Budd told members of the Western Railway Club in Chicago that successful stewardship would require unity on three important and basic areas. "We must," he said:

(1) "Recognize the problems affecting the whole railway industry, establish a policy of action toward meeting and solving them, and *then act*;

(2) "Provide a better standard of service throughout the entire railway system; and,

(3) "Given the opportunity, establish proper pricing for our services and *do a job of selling them*."

Such an accomplishment, he said, would involve much compromise on the part of individual companies, "but it is my sincere conviction that we must have solid accord in these basic areas if the railway industry is to keep its health."

Better Service?—Suggesting that the industry work toward putting its own houses in the best of order, Mr. Budd pointed to the multi-billion dollar postwar improvement program, and stated: "In my opinion our overall performance does not match the potential of today's railway plant." Top notch service, he said, is "imperative." The industry "can afford nothing less in the future than a reputation for superior handling of the business it receives from every shipper, large or small, if it expects to survive in private ownership."

"It is surprising to find tonnage moving in considerable volume by trucks at higher-than-rail rates. The only answer to this condition must be better service—a great deal better service to justify paying higher transportation costs."

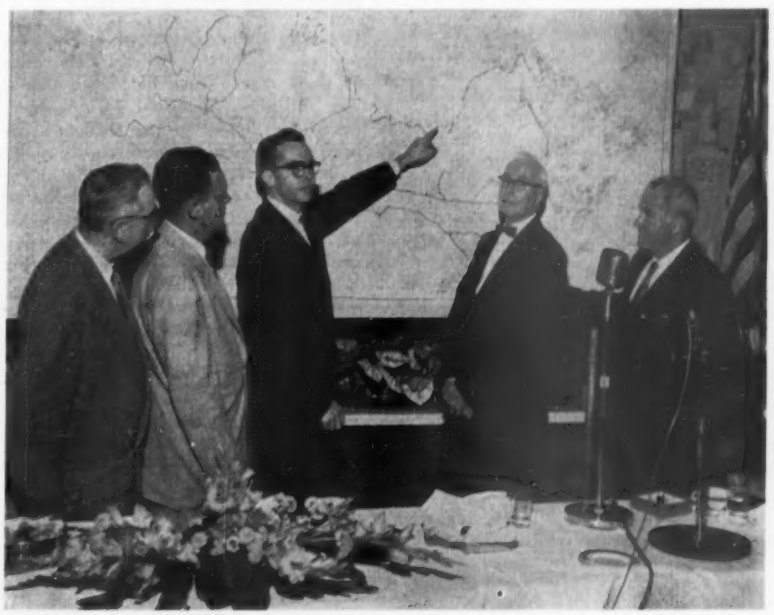
Citing the difficulty of obtaining capital funds for improvements, Mr. Budd said he believes there is "a tremendous opportunity for improving service with present plant with only minor expenditures." He suggested "closer association with our neighboring roads, a lot of 'give' on the part of all of us and a lot of good, sound railroading by all."

Goodwill Isn't All—The railroad industry story has been "magnificiently" told during the past 25 years, he said. "We enjoy a substantial and valued measure of public goodwill, but considering what has happened in the past five years to the railway industry's competitive position and the seeming reluctance of government to face the facts of the transportation muddle, it seems reasonable to wonder whether we have not created a climate of complacency for the public, and, to an appreciable extent, for ourselves."

Earlier in his talk Mr. Budd outlined the growth of competing transport agencies and commented that "It seems significant that while each has chosen a certain part of railway traffic, none attempts to provide the overall service of a common carrier. It seems more significant that with all the advantages poured upon publicly supported transport agencies, to help develop them, the railways have retained the majority of traffic—except on intercity passenger travel where the private automobile is far out in front of the field."

He expressed concern over "the apparently deep-seated belief on the part of the Administration and the Congress that railways will survive regardless of the billions now being spent on b half of our competitors without assessment of proper user charges for publicly provided facilities."

"Dramatic changes," he said would certainly result in railway services and rates if the carriers could be relieved of the investment in fixed property and the annual maintenance charge. "But think of the extent to which taxes



CANADA'S EXPANDING ECONOMIC FRONTIERS were described to members of the American Railway Magazine Editors Association at their October 1 convention banquet in Montreal by R. Gordon Robertson (center), the Dominion's Deputy Minister for Northern Affairs and National Resources and Commissioner of Northwest Territories. With Mr. Robertson, from left to right, are C. W. Higgins, managing editor of the Canadian National magazine; William B. Grumley, editor of the Nickel Plate magazine, and new president of ARMEA; Clifford A. Somerville, publicity manager of the Boston & Maine, editor of the B&M magazine, and immediate past president of ARMEA; and H. T. Coleman, assistant to manager—department of public relations, Canadian Pacific.

would have to be increased to make this possible," he added.

He found the recent remarks of Undersecretary of Commerce for Transportation Robert B. Murray to the National Association of Motor Bus Operators (*Railway Age*, October 11, page 19) on the President's Cabinet Committee on Transport Policy and Organization "encouraging." "But we in the railway industry," he added, "are looking forward to more proof of the sincerity of this expression than displayed by the Administration to date."

From the ICC

Get New Business, Clarke Tells Roads

IC Commissioner, who is also administrator of DTA, says it's time to end preoccupation with dividing present traffic and start building more volume

Interstate Commerce Commissioner Owen Clarke believes that if the railroad industry is to "recuperate," its management "must start drumming up new business instead of dividing up old business."

"The railroads," he said, "appear to be resigned to the fate of diminishing tonnage. Instead of wasting time and energy trying to take carloads of freight away from each other, they should be directing their attention and abilities to the necessary task of equipping themselves to take business away from their competitors."

Commissioner Clarke, who is also administrator of the Defense Transport Administration, made these statements in an address delivered October 22 before the Seattle (Wash.) Chamber of Commerce.

"Genuine Opportunities" — Mr. Clarke also said that there appear to be "genuine opportunities for the rails to regain a substantial amount of lost traffic." He conceded that rate adjustments "will help," but he insisted that they are "not a miracle drug or cureall." He is "firmly convinced" that "*service* is vastly more important."

The commissioner does not believe that the railroads have "lost their ability to handle all kinds of traffic efficiently and economically." Thus, he suggested, the "only possible conclusion" as to the reason for the failure of traffic to keep pace with production is that the railroads "have not yet succeeded in adapting themselves to the new competitive atmosphere."

Mr. Clarke recognized that some of this slowness may be attributed to restrictive legislation or failure to obtain rate adjustments. But he does not think those are "dominating or major" factors.

What Others Do—As to the "simple solution" of raising rates and reducing wages, Mr. Clarke had this to say: "In other fields of competitive enterprise, a business on the verge of failure, finding the margin between income and expenses paper-thin, usually deems it unwise to do either of those things. At such times the enterprising executive does not sit back and calmly wait for the sheriff. Instead, he searches for ways and means of capturing more business."

The commissioner went on to suggest that there is perhaps too much concern on the part of individual roads "for their particular share in any piece of business." Putting it another way, he said there may be "too little thought given to the fact that any business kept on the rails helps the entire industry." Also, it seems to him, that the railroads "would be better off with a larger volume of business, even if it means a lower unit price, than with a diminishing share of the whole business at an increasingly higher price."

Operating Methods — He thinks, too, that the railroads "need to make drastic changes in their operating methods." He has in mind the elimination of duplicate services, the abandonment of unprofitable operations, and the coordination of existing facilities.

Meanwhile, Mr. Clarke noted that "happily, there are encouraging signs that this great medium of transportation, at long last, is entering a new era." It "seems to be recovering from a state of shock and the defeatist complex under which it has operated for so many years. . . . Today new technologies and a newer and more vigorous management promise to bring great benefits not only to the railroads but to the entire economy of the country. . . . Since the war one billion dollars a year has been put into modern new facilities."

ILLINOIS TERMINAL MAY ABANDON MORE LINES

A line abandonment of major proportions—involving nearly 240 miles of main track—may be in the offing. The Illinois Terminal, which has asked permission of the Illinois Commerce Commission to discontinue all passenger service except locally in the St. Louis area, told the commission on October 20 that deferred maintenance of its electrified lines and equipment, caused by heavy passenger operating losses, may force the company to seek outright abandonment of all lines north of Edwardsville, Ill.

F. L. Dennis, vice-president—operations and maintenance, testifying before the commission at Springfield, Ill., said main-line passenger service between St. Louis and Peoria and between Springfield and Champaign is presently running up operating losses of $500,000 annually and is forcing deferment of maintenance of these electrified lines and their equipment. Continuation of such losses, he said, would force the company to seek the aforementioned abandonment. The affected routes, at one time the McKinley Traction System, are now largely dieselized for freight service but passenger trains still use electric power. Abandonment of them would have no effect upon the company's diesel powered freight routes in the Alton-Wood River-Granite City area opposite St. Louis in Illinois.

Operations

Faster Freight Service On Pacific Coast

A new and faster freight service from the San Francisco Bay area to Portland and Seattle was placed in effect by the Western Pacific and the Great Northern October 18.

Symbol freight train "SWG," which leaves San Francisco at 7 p.m. and Oakland at 10 p.m. each night, now arrives at Portland at 5:30 p.m. the second day, and at Seattle at 10 p.m. —eight hours earlier than heretofore. Deliveries can be made in both cities on the third morning. Connections with schedules for other Pacific Northwest cities have been similarly improved.

The Santa Fe operates a connecting service from Los Angeles on Mondays, Tuesdays and Fridays, leaving at 10 p.m. and providing fourth morning placement in both Seattle and Portland. Free LCL pick-up and delivery is provided.

The trains operate via the Bieber, Cal., gateway, with connections with the Santa Fe at Stockton.

Hurricane "Hazel" Hits Railroads Hard

Railroads in southern and middle Atlantic states and in Ontario were hard hit on the night of October 15 by 1954's eighth hurricane—designated "Hazel."

The storm, following an unusual path for a hurricane moved inland up the Atlantic seaboard from the Carolinas, and continued north into Canada, hitting Toronto with particular severity. It brought with it high winds and torrential rains, which del-

uged Toronto with nearly seven inches of water.

Pennsylvania—Hardest hit U. S. railroad, apparently, was the Pennsylvania, on which damage to electric catenary structures, caused by falling trees and poles, led to numerous train delays in the New York-Philadelphia Baltimore-Washington-Harrisburg area. Most PRR trains in that territory, including New York-Washington, east-west, and Philadelphia suburban services, were at a standstill for about three hours at the height of the storm, with considerably longer delays to some individual trains.

Philadelphia suburban services were back to normal by midnight, October 15, while longer distance trains were operating normally by the following morning.

The PRR's troubles were compounded by flood conditions in the Pittsburgh area; the road estimates that its total bill for "weather damage" in the past two weeks will exceed $1 million—including the effects of "Hazel," the high water at Pittsburgh, and recent flood damage at Chicago's Union Station (*Railway Age*, October 18, page 7).

Other U. S. Roads—The Baltimore & Ohio, in the same general area, was more fortunate, though some of its New York-Washington trains were delayed. Its affiliated Central of New Jersey also reported some train delays on its line from Jersey City to Bay Head Junction, N. J., principally because of trees or poles blown down across tracks.

On the New York Central, "intermittent power failures" between Mott Haven and White Plains, N. Y., delayed 32 suburban trains for periods of from two to 20 min, and other storm damage held up eight Harlem division trains for periods ranging up to 58 min.

Such roads as the Coast Line, Seaboard and Southern, operating south of Washington, reported train delays resulting from storm-caused damage to signal systems, falling trees, etc.

The New Haven, victim of two earlier 1954 hurricanes, escaped unscathed from "Hazel."

Canadian National—The CNR had more than 150 washouts, including one about 600 ft. long, affecting culverts and small bridges and one station. Eleven of its October 15 trains were cancelled, one derailed, and four delayed from three to five hours; the following day 15 trains were cancelled and 11 delayed from one to 10 hours. No dollar estimate of damage was available at press time for this issue, but with extra crews working on a round-the-clock basis resumption of normal service on all main lines was anticipated by the end of last week—seven days or less after the storm.

Canadian Pacific—The CPR reported 15 washouts, from 10 to 30 ft deep and 100 to 200 ft long, on its main line north of Toronto toward western Canada (Mactier subdivision); washout of a bridge pier and abutment, with resulting collapse of a 105-ft steel span across the Rouge river on the Peterboro subdivision near Locust Hill, Ont.; bad scouring of a Humber River bridge pier on the Galt subdivision west of Toronto; and "eight or 10" deep washouts and slides on the Orangeville subdivision between Toronto and Owen Sound. Slow orders were placed on practically all main CPR lines in southern Ontario during and after the storm, and train delays of up to 12 hr were experienced.

Rebuilding of the Locust Hill bridge was begun October 18, and is scheduled for completion by October 27, with the Dominion Bridge Company assisting in the work. The scoured-out Humber River bridge will require a new pier, or heavy repairs to the damaged pier.

NYC Will Stop Annual Passes to Other Roads

The New York Central on January 1 will discontinue issuance of annual passes to employees of other railroads. Similar action recently was taken by the Pennsylvania, and the New Haven has said it will "tighten up on foreign passes" (*Railway Age*, October 11, page 10). The NYC will not request annual passes on other lines for its employees. It will continue trip passes, and half-rate transportation to employees of other roads for vacation travel and emergencies.

Labor & Wages

Emergency Board In Pullman Case

President Eisenhower has created an emergency board to investigate the dispute between the Pullman Company and those of its employees who are represented by the Order of Railway Conductors and Brakemen.

The dispute is a wage case, the major issues being the retroactive application of a proposed increase and the hours per month to which it would apply.

The emergency board was created October 16, three days before the date set by the union for the beginning of a strike. Members of the board were not named immediately.

People in the News

Renz Succeeds Tabbert In Car Institute Post

Walter A. Renz, general attorney of the Lehigh Valley for the past eight years, has been named secretary of the American Railway Car Institute to succeed William C. Tabbert, who is retiring after 35 years' service.

Mr. Renz served as a major with the Army and Air Force from 1940 to 1946. A member of the New York State Bar, he is also a member of the law committee of the Associated Railroads of New York, the law and operating committees of the Associated Railroads of Pennsylvania, and the Eastern Accounting Conference of Eastern Railroads.

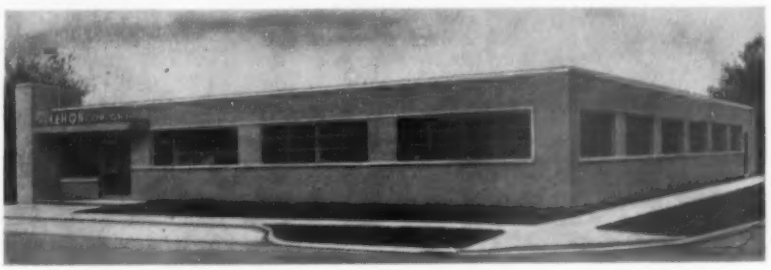
Law & Regulation

Arpaia Urges All-Europe Transport Administration

Noting that 90% of American railroads' business is in interstate traffic Interstate Commerce Commissioner Anthony F. Arpaia advised European transportation experts to break down border obstacles and set up an international administrator of surface transport.

He addressed the International Convention on Transportation at Genoa, Italy, October 7.

He said a single transportation agency for Europe "will be found necessary eventually" and he advocated a unified, coordinated transport system



THE LEHON COMPANY has moved its general office from 4425 S. Oakley avenue, Chicago, to this new building at Madison and 25th avenues in Bellwood, Ill., a suburb of Chicago.

utilizing the "best features of rail and motor transportation."

The American railroads had it within their power to set up such a system, using truck and bus networks to supplement the rails, following ICC investigations of highway usage in 1928 and 1932, Mr. Arpaia said. "In spite of the obvious need for coordination of rail and motor service," however, "the railroads still failed to comprehend the significance of over-the-road transportation."

A "phenomenal" growth of the truck industry independent of the railroads resulted, he said, so that now "if the alternative were again open to the railroads they probably, from the beginning, would have established an integrated, coordinated system of transportation . . . thereby reducing duplicative and wasteful facilities and service."

ICC Would Maintain Control of Examiners

The Interstate Commerce Commission is opposed to a proposal that it relinquish jurisdiction over its hearing examiners to a new, independent office of administrative procedure.

The final responsibility, in any case, the commission holds, rests with the agency itself and "examiners are not and cannot become independent judicial tribunals without changing in a very fundamental way the very nature of the administrative agencies as they now exist." Administration of the national transport policy cannot be delegated to examiners, the commission declared.

Such a transfer of jurisdiction was advocated in one of two conflicting reports submitted to the President's Conference on Administrative Procedure by members of a committee studying the status of federal examiners.

The ICC, in a statement by Commissioner Hugh W. Cross to the conference, rejected this proposal but endorsed, in the main, the view of the other half of the committee, which recommended continuance of the present jurisdiction. The commission's position was repeated by Commissioner Kenneth H. Tuggle in a speech to the District 1 chapter of the Association of ICC Practitioners at Boston October 14.

In its statement to the conference, the commission recommended that its experiences with hearing examiners be utilized as a guide for any action taken. The ICC has used examiners for almost 50 years and employs more than a third of the examiners used by federal agencies.

Briefly . . .

. . . **The Southern Pacific** is going to discard "Pullman Green" as a color for its passenger trains. As rapidly as cars undergo shopping, those not assigned to individually colored streamliners will be painted in a new two-tone gray scheme, set off by lighter striping. The program will not affect SP trains which, because of joint operation, use the color pattern of another road.

Rates & Fares

"Double Reservation" Practice Condemned

Simultaneously reserving space for the same trip on an airline and a railroad was sharply attacked by Andrew H. Brown, traffic commissioner, Cleveland Chamber of Commerce, at a recent Mansfield, Ohio, meeting of the Great Lakes Regional Advisory Board.

"We're sincere in trying to help reduce railroads' losses, because eventually we benefit thereby," Mr. Brown told the shippers, "but we've confined our attention to railroad freight practices. We give no thought to the practice of 'double reservations' that is complicating the railroads' passenger losses. The practice is serious in the case of airlines, more serious in the case of railroads."

When a holder of two tickets decides to fly and get a refund later from the railroad, those who would have purchased the train space had it been available, are left behind, and railroad passenger revenues suffer, Mr.

TRAVEL PROBLEMS are discussed with travel service clerks in the privacy of a phone booth rather than at the traditional counter. Based upon the success of its original telephone ticket office (*Railway Age*, December 15, 1952, page 49), the Southern Pacific has opened this new version in its San Francisco headquarters building at 95 Market street. The entire service process, from information through reservations and ticket makeup to the point of actual sale, is handled on a production line basis by a staff located elsewhere in the building.

LOUNGING FACILITIES take up much of the total agency floor space. Passengers seated in the foreground have phoned their ticket and reservation needs to the handling center and will soon be summoned to the cashier's desk for the final sales transaction. "Will call" service also is available. The production line system eliminates customer "lineups," provides a basically faster service, and has a higher volume capacity than the usual ticket counter clerk system. Known as the "Central Travel Service Agency," this office replaces the SP's city ticket office.

Brown said. "If the practice of 'double reservations' was minimized or completely eliminated, it would sharply reduce the railroads' excessive yearly losses. All shipping boards can well afford to make a serious study of the practice."

"Agreed Charges" Up For Action in Canada

A nationwide inquiry into operation of so-called "agreed charges"; federal approval of such charges on transcontinental steel movement; and a delayed decision on a pending application for such rates on automobiles, have brought the whole question of agreed rates decidedly to the fore in Canada in the past few weeks.

Approved on Steel—The new charges approved by the federal Board of Transport Commissioners apply to steel sheets and plates moving from Ontario to British Columbia. They represent a rate cut of 50%—from $2.20 to $1.10 per hundred pounds—in return for which the steel plants have guaranteed the railways the entire movement for a year. The cut was necessary, steel producers said, to enable them to compete for West Coast business.

Delayed on Autos—The board has delayed its decision, however, on a proposed rail rate cut of 30% in return for a guarantee of 75% of automobile shipments to the Pacific Coast made by General Motors Corporation from Oshawa, Ont., and by Studebaker from Hamilton.

Opposition to these proposed charges came from the province of Alberta, from a national organization of truckers, from auto dealers and other concerns, including Chrysler Corporation.

Inquiry—Meantime, a Royal Commission headed by Justice W. F. A. Turgeon began, at Winnipeg, a Dominion-wide series of hearings on operation of the agreed-charge system.

In a brief filed with the commission, the Canadian Pacific has proposed more flexibility in the making of such charges, to meet truck competition. The CPR has urged, especially, removal of the present requirement that the rates be first approved by the Board of Transport Commissioners, because of the delay involved in such approval; and elimination of the possibility, said to exist under present law, that parties not wishing to join an agreed charge pact can obstruct an agreement by others.

ICC Ends Probe of N. J. Commutation Fares

The Interstate Commerce Commission has discontinued investigations of New Jersey-New York commutation fares which it instituted last month.

Two proceedings were involved—No. 31621, a general inquiry into commuter fares maintained by Jersey roads, and I.&S. No. 6260, wherein a Lackawanna tariff proposing increased commuter fares had been suspended. The discontinuing orders, by the commission's Division 2, came after petitions seeking such action had been filed by the railroads. (*Railway Age*, September 27, page 8.)

Figures of the Week

Railroads Continued to Slip in '53

Their share of intercity ton-miles was 51.7% of total, compared with 55% in 1952

The railroads' "share" of total intercity traffic, as measured by ton-miles, was only 51.7% in 1953. That compared with 55% in 1952.

Meanwhile the truckers' "share" was up from 16.2% to 17.4%, and that of the water carriers was up from 14.9% to 16.9%. These and other like figures for other agencies are set out in the accompanying table, reproduced from the latest "Monthly Comment" of the ICC's Bureau of Transport Economics and Statistics.

The bureau noted that the 1953 total of 1,187 million ton-miles was the highest on record. As to the water-carrier figures, it explained that the Army's Corps of Engineers has extended the coverage to facilities not previously included, thus adding between four and five billion ton-miles. However, the 1953 total would still be a record without such additions from the extended coverage.

Volume of Intercity Freight Traffic in Ton-Miles by Kinds of Transportation, Years 1952-1953

Transport agency	Ton-miles (billions) 1952	1953[1]	Per cent of increase, 1953 over 1952	Per cent of annual total 1952	1953
Railways, steam and electric including mail and express	623.5	614.4	— 1.5	55.0	51.7
Motor vehicle, for-hire and private use	184.1	206.8	+12.3	16.2	17.4
Inland waterways, including Great Lakes	168.4	200.1	+18.8	14.9	16.9
Pipe lines (oil)	157.5	165.7	+ 5.2	13.9	14.0
Airways (domestic revenue service, including express and mail)	.4	.4	+ 2.9	[2]	[2]
Grand total	1,133.9	1,187.4	+ 4.7	100.0	100.0

[1] Preliminary estimates.
[2] Represents about 0.037 of one per cent in 1952 and about 0.036 in 1953. Basic figures are 415 millions in 1952 and 427 millions in 1953.

Freight Car Loadings

Loadings of revenue freight in the week ended October 16 totaled 721,402 cars, the Association of American Railroads announced on October 21. This was an increase of 18,209 cars, or 2.6%, compared with the previous week; a decrease of 101,180 cars, or 12.3%, compared with the corresponding week last year; and a decrease of 117,006 cars, or 14%, compared with the equivalent 1952 week.

Loadings of revenue freight for the week ended October 9 totaled 703,193 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, October 9

District	1954	1953	1952
Eastern	108,146	131,847	140,862
Allegheny	120,731	151,592	161,437
Pocahontas	51,088	57,965	56,484
Southern	124,265	129,046	130,939
Northwestern	112,810	137,158	146,569
Central Western	129,596	133,147	140,242
Southwestern	56,557	63,311	66,264
Total Western Districts	298,963	333,616	353,075
Total All Roads	703,193	804,066	842,797
Commodities:			
Grain and grain products	48,128	53,287	54,908
Livestock	14,988	15,698	17,040
Coal	124,745	134,914	134,184
Coke	7,844	12,871	14,788
Forest products	45,386	43,207	41,324
Ore	48,603	78,796	88,985
Merchandise l.c.l.	65,672	71,608	75,620
Miscellaneous	347,827	393,685	415,948
October 9	703,193	804,066	842,797
October 2	721,883	812,534	851,920
September 25	710,215	819,709	862,065
September 18	711,228	823,883	873,596
September 11	601,525	710,554	881,291
Cumulative total, 41 weeks	26,456,248	30,683,030	29,712,613

In Canada.—Carloadings for the nine-day period ended September 30 totaled 106,393 cars, compared with 77,455 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
September 30, 1954	106,393	35,047
September 30, 1953	116,617	40,260
Cumulative Totals:		
September 30, 1954	2,722,165	1,064,629
September 30, 1953	1,064,629	1,234,053

Competitive Transport

Commerce Dept. Grants $20 Million for Airports

Topped by a $1,665,000 grant to the city of Chicago for a new runway on O'Hare Field, an allocation of $20,-

425,843 for airport construction or improvement has been announced by Secretary of Commerce Weeks. It comprises his department's federal-aid airport program for fiscal year 1955 and extends to Alaska, Hawaii, Puerto Rico and the Virgin Islands.

Other cities benefited by large allocations include New York, $600,000; Minneapolis-St. Paul, $488,700; Portland, Me., $500,000; San Francisco, $500,000; Long Beach, Cal., $453,000; and New Orleans, $400,000.

Railroads Assail Further Post Office "Experiment"

Inclusion of Pacific Coast routes in the Post Office Department's "three-cent-mail-by-air" program was challenged by the affected railroads in a statement to the Civil Aeronautics Board.

The roads, represented by Gregory S. Prince, assistant general counsel, Association of American Railroads, asserted that the proposed new routes linking coast cities between San Diego and Portland would cost them $769,150 annually. The railroads' position was included in a petition to intervene in the Post Office Department's application for the new service.

As reported in *Railway Age* of October 18, page 10, the Post Office wants to have the Pacific Coast service added to existing first-class-by-air mail services in time for "the Christmas rush." Chicago, New York City, Washington and cities in Florida already are receiving the service in the "space available" experiment.

Traffic

Defense Department Ends Traffic Pact with GSA

Secretary of Defense Wilson has ended an agreement for cooperation on transportation-procurement and traffic-management matters which was entered in 1950 by his department and the General Services Administration. Procurement of transportation for Defense-Department shipments and travel was exempt from the agreement, but it did provide for joint handling with GSA of various other matters, including the development of policy "designed to effect equitable distribution of traffic among carriers."

Termination of the agreement became effective October 2. The end was brought about by a Wilson letter to Administrator Mansure of GSA and a certificate of exemption which the defense secretary issued under provisions of the Federal Property and Administrative Services Act of 1949. In the certificate, the secretary said he had determined it would be "in the best interest of the national defense" for the department to be exempt from any action taken by GSA with respect to:

(a) Prescription of policies and methods of procurement and supply of transportation and traffic management.

(b) Performance of functions related to procurement and supply of transportation and traffic management.

(c) Representation in negotiations with carriers and in proceedings involving carriers before regulatory bodies.

The "focal point" of responsibility for these matters will be the Office of the Assistant Secretary of Defense (Supply and Logistics), a Wilson directive stipulated. The secretary did say, however, that the department would continue to cooperate with GSA on transportation and traffic matters of "mutual interest."

President Eisenhower paved the way for the Wilson action last June, when he revoked a 1949 memorandum issued by former President Truman. The agreement (*Railway Age*, October 14, 1950, page 37) was based on the Truman memorandum. The Administrative Services Act contemplated generally that all traffic management activities of the government would be brought together in GSA; but it also contained provisions which authorize the secretary of defense to exempt such activities of his department—"unless the President shall otherwise direct."

Organizations

Military Railway Units Shrinking—Yount Worried

Fear that the nation may be seriously crippled for lack of properly trained military railway units was expressed in Milwaukee recently by Major General Paul F. Yount, the U. S. Army's chief of transportation.

In speaking to the ninth annual meeting of Military Railway Service Veterans, General Yount termed the decline of MRS reserve units as "a sad, unsafe and perplexing state of affairs." He said that, at the time of the group's previous convention, there were 18 MRS reserve units in training status, while now there are only 12. One-third of them were deactivated for lack of assigned strength and some of the remaining 12 are approaching minimum limits, he added.

"Less than a decade ago," he commented, "the MRS was at the peak of its power to deliver the goods. It was 48,000 strong, primed with a thoroughbred background of the greatest railroads of the world. These MRS men poured on the supply pressures that broke the back of the Axis and contributed much to bringing the war to a successful conclusion.

No Repeat—"Some of you may feel that we did it before and can do it again when the need is upon us. My answer is that we will not have the time. Our oceans are no longer the barrier of the past. The U. S. is the arsenal of the free world and, as such, is the primary target of any aggressor. Therefore, a sound posture of preparedness requires that we have rail units in being, just as we have infantry, guided missile, atomic artillery, and every other type of combat and service unit."

General Yount suggested that application of atomic power to military field requirements would ultimately reduce the need for transporting "huge tonnages" of hard and liquid fuel. He suggested that the new power source "be explored as to transportation and supply use," as well as in the weapons field.

New Officers—Fred Popowitch, deputy director general of the MRS and an employee of the Pennsylvania at New York, was named director general of the organization. He succeeds Harold C. Mauney, resident vice-president of the Southern at New Orleans. The new deputy director general is Lawrence Lepine, general foreman, Soo Line shops, Fond du Lac, Wis. Fred W. Okie, president of the Bessemer & Lake Erie and the Union, was reelected secretary-treasurer.

The organization picked Cincinnati for its 1955 convention, to be held September 16-18.

Arpaia to Address Hartford Meeting

Interstate Commerce Commissioner Anthony F. Arpaia and C. M. Hutchins, president and chairman of the board, Bangor & Aroostook, will speak at an area transportation conference at Hartford, Conn., November 5.

The conference is sponsored by the Chamber of Commerce of the United States, and the Connecticut and Hartford chambers. Robert J. Bayer, editor of "Traffic World," will also speak.

A panel on special rates for the government will include J. P. Harrington, assistant Freight Traffic Committee, New England Territory Railroads; Frederick G. Freund, director, Traffic Department, American Trucking Associations; J. G. Scott, general counsel, National Association of Motor Bus Operators; Harry S. Brown, chairman, Intercoastal Steamship Freight Association; Stuart G. Tipton, counsel, Air Transport Association; Gordon C. Locke, executive secretary, Committee for Pipe Line Companies; and, as moderator, Warner B. Shepherd, general traffic manager, Aluminum Company of America.

Work equipment — its scheduling, maintenance and operation—will be the subject of a roundtable discussion at a meeting of the **Metropolitan Maintenance of Way Club** at the Railroad-Machinery Club, New York, at 8:30 p.m., October 28. The moderator will be W. E. Kropp, supervisor

of work equipment, Lehigh Valley. A dinner at 6:30 p.m. will precede the meeting.

The 66th annual convention of the **National Association of Railroad and Utilities Commissioners** will be held in the La Salle Hotel, Chicago, November 8-11, inclusive.

Thomas W. Hays, general signal engineer of the Union Pacific, has been named chairman of the signal section of the **Association of American Railroads** for 1955. E. N. Fox of the Boston & Maine was chosen first vice-chairman, and A. L. Essman of the Burlington was named second vice-chairman.

E. Grosvenor Plowman, vice-president—traffic, United States Steel Corporation, will address a November 11 joint luncheon meeting of the **Traffic Club of Chicago** and the Chicago chapter of the **National Defense Transportation Association** in the terrace casino of the Morrison Hotel.

Financial

Central Supports Claim Of Alleghany as Carrier

The New York Central has submitted a brief to the Interstate Commerce Commission in support of Alleghany Corporation's bid to retain carrier status. The Central declared that return of Alleghany to jurisdiction of the Securities & Exchange Commission as a "non-carrier" would subject the road and its subsidiaries to SEC control as well because they are affiliates of the holding corporation.

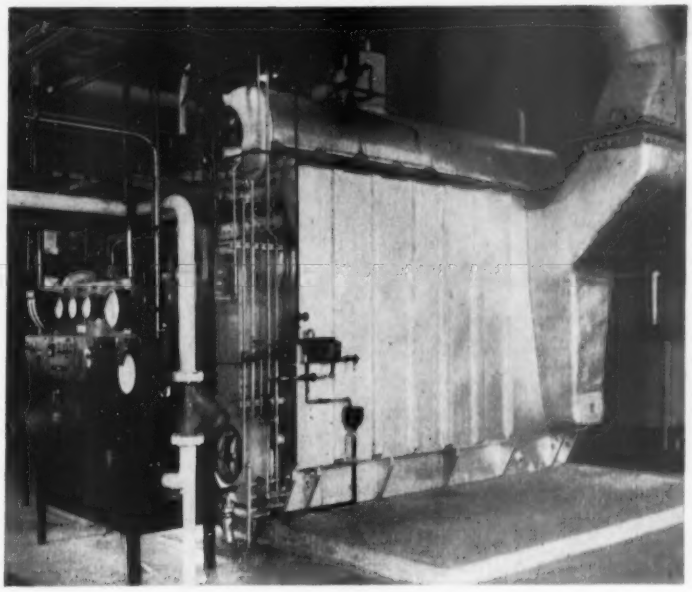
Earlier, Alleghany had rebutted a "memorandum" filed by the SEC with the ICC challenging Alleghany's right to carrier status. Alleghany declared that loss of such status would lead to the "conflict and confusion" Congress hoped to avoid when it exempted carriers from SEC jurisdiction. The corporation stated that it plans to increase its holdings in rails to not less than 75% of its total portfolio and reasserted its claim to control of the Central.

The SEC has postponed its own hearings on Alleghany's status indefinitely.

Securities

Lehigh Valley.—*Bond Redemption.*—The LV will redeem on November 24 all $2,489,000 of its outstanding Pennsylvania & New York Canal & Railroad Co. 5% bonds due April 1, (*Continued on page 43*)

A Package Boiler With *Many* Advantages



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Questions and Answers FOR THE TRANSPORTATION DEPARTMENT

Is a public delivery track always a public delivery track?

No it is not, under certain circumstances.

Consignee "A" makes an oral agreement with the railroad permitting him to build a two-car-length platform at the bumper end of a track ordinarily used for public delivery at station "X," with the understanding that his cars will be placed at this platform. Everything goes nicely until consignee "B," unloading with a power shovel from gondolas on the team track, leaves the boom of the shovel in a car when he quits work on a Monday evening. "B" does not go back to work until Thursday. In the meantime, on Tuesday at 8 a.m., there were two newly received cars in the yard for A, and two empties at A's platform. The agent gave A written notices of the arrival of the two loads, and was advised immediately that A wanted the cars placed at the platform (in accordance with the agreement) and the two empties pulled. However, because the railroad was unable to move B's cars, the loads were held in the yard and then placed at A's platform at 2 p.m. Thursday, at which time the empties were pulled.

Was the agent correct in computing demurrage time from Tuesday on the inbound loads under the provisions of Rule 5, Section B, pages 1 and 2?

A is the only consignee who can use the two car lengths of track blocked off by his platform. Therefore, this part of the track is "other than a public delivery track" under the demurrage tariff (Item 20-c), and must be so considered in applying the rules. It is my opinion that there is no basis for charging A with detention on cars arriving for him until such cars are placed at the platform, assuming there is room for them at the platform. Cars unloaded should be released in the demurrage account when unloaded. — *S. R. Jennings, manager, Eastern Demurrage & Storage Bureau*

CONDUCTED BY G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, *Railway Age*, 30 Church Street, New York 7.

HERE'S ANOTHER *RAILWAY AGE* CAR SERVICE "QUIZ"

***The Problem*—A paper company, whose plant in northern New York state is served by the New York Central, on one certain day had orders to ship 20 cars, as follows:**

Destination	*No. Cars to be shipped*	*Delivering Carrier*
New York	3	NYC
Baltimore, Md.	1	PRR
Birmingham, Ala.	1	L&N
Chattanooga, Tenn.	1	Sou
Council Bluffs, Iowa	1	CB&Q
Chicago	1	NYC
Decatur, Ill.	1	Wab
Des Moines, Iowa	1	Milw
Cleveland	1	NYC
Evansville, Ind.	1	NYC
Erie, Pa.	1	NYC
Lima, Ohio	1	NKP
Peoria, Ill.	1	NYC
Pueblo, Col.	1	C&S
Indianapolis, Ind.	1	NYC
Shreveport, La.	1	T&P
Syracuse, N. Y.	1	NYC
Terre Haute, Ind.	1	NYC

Suitable cars available at the time for loading were the following:

AT&SF, 2; CB&Q, 1; DL&W, 1; GM&O, 1; IC, 2; M&StL, 1; NYC, 4; NKP, 1; NC&StL, 1; PRR, 1; Sou, 1; UP, 1; Wab, 1; WM, 1; CMStP&P, 1.

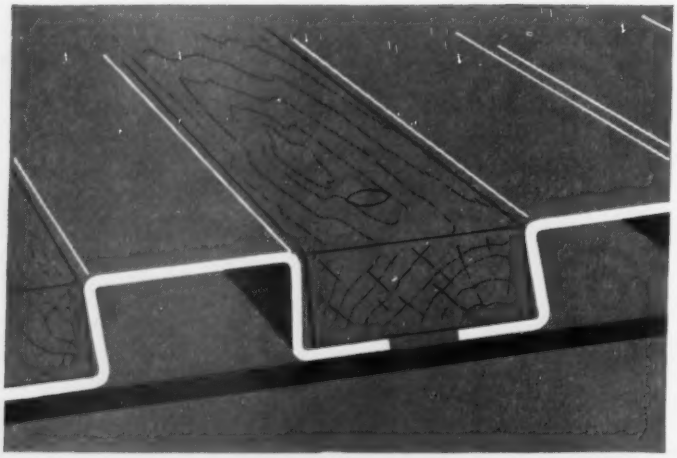
The paper company, through its activities in the Shippers Advisory Board in its territory, had become interested in Car Service Rule observance and knew of the beneficial effect rule observance had in getting cars back on the rails of owning roads.

Consequently, the paper company's loading foreman got out his sharp pencil and figured which cars he should load to which destination so that upon unloading, each car would be (1) on home line or (2) at a junction with the owning road.

The question is: Which cars did he load to each destination?

Although this "quiz" is centered around a shipper, the same rules would apply if a yardmaster had to assign cars under these conditions. Answers to this question will be published in this column in the December 6 issue of *Railway Age*, along with the names of those who send us the correct answers. So, please get your answers in the mail.—*G.C.R.*

WHAT ARMCO FREIGHT CAR FLOORING DOES FOR THIS GONDOLA



Here's an old car with a new Armco composite steel and wood floor designed for today's requirements. Now it can bring bulk loads into a plant, then carry away the manufactured product. This saves time and money in switching empty cars.

Armco Freight Car Flooring is ideal for gondola, box or flat cars—in new construction or in the replacement of wornout wood or steel plate floors in existing cars.

The Armco hat-section steel ribs are made to resist concentrated loads and impacts that would break through wood flooring. They take the high wheel loads of lift trucks in box cars, the impact of clam shell buckets on gondola and flat cars.

Wood Planks for Nailing

Alternately-spaced wood nailing strips permit nailing of skids in the proper way—to a stout wood plank.

Proved in service

In addition, this floor offers operating economy through longer floor life, better protection for lading and less time out for repairs. Five years of service have proved the design of Armco Freight Car Flooring and installation practice to be sound.

For more information on this multi-purpose car floor, write us for the booklet, "Armco Freight Car Flooring" at the address below.

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"Ain't Nobody Here But Us Chickens"

Nobody prizes the railroads' traditional rate structure more highly than the truckers. That industry has a deep and well-founded distaste for realistic competitive-type rate making by the railroads. The truck people have a selfish interest in seeing the railroads continue to make rates as though they were still a monopoly. A well conceived strategy seems to have been worked out with this end in view.

The first argument is a sentimental one. It has already been used in individual rate cases. We suspect that more will be heard of it as efforts are made toward a change in government policy. The argument goes something like this:

Trucking (so the contention goes) is comprised of many small, independent business men. They have little capital; work on small margins; can easily be starved out by the "big railroads," with their access to Wall Street capital. Once the railroads have ruined trucking by rate cutting, they will then raise rates to levels higher than ever before. Since, obviously, the country should encourage the growth of "small business," it ought to protect the trucking industry against the railroads.

Such an argument, of course, overlooks completely the enormous growth of long-distance trucking in the last decade; and the rise of large aggregations of assets and revenue in the trucking business. It is a fabulous fantasy to portray the trucking business as a poor, struggling infant, in constant danger of extermination by rich, powerful railroads. What is being asked, folks, is that you should ignore those sounds of struggle you hear in the barnyard; because there "ain't nobody here but us chickens."

The second major argument in favor of this point of view is neither original nor exclusive with the truckers. Important people outside the industry present the same viewpoint. In fact, some railroaders share it.

Its general drift is: The railroads have lost traffic to the trucks because the trucks are more flexible, give better service. The railroads don't need freedom to fight back. What the railroads should do is to improve their service, or to join up with the truckers by carrying their trailers piggyback. This is the idea put forth, for example, by James K. Knudson, former ICC member and Defense Transport Administrator, in a recent Washington speech: "It is not the rate problem that is controlling; it goes back to . . . service."

The argument is soft and tempting—and (in our opinion) both fallacious and dangerous. If this course of action is followed, the railroads will bankrupt themselves transforming their operations into something they are not suited for; their advantage lies in another quarter.

The railroads' great economic strength lies in the character of *their* costs—which diminish as utilization of plant increases and which provide a much wider range of profitable charges than the truckers possess. This has been demonstrated beyond argument. No one will contend that present rates on the railroads take active advantage of this inherent cost advantage. As the only true common carrier, the railroads, in their rate making, are actually forced to "make believe" that volume and distance have no effect on cost. They are also forced to pursue the now unrealistic fiction that the value of the goods inherently does and should affect the rate charged.

This mode of behavior—the inheritance of a former era of beneficent monopoly, but without any theoretical justification whatever today—is the umbrella which fosters the extension of trucking far beyond the zone of its true economy.

Good for a night's argument around any local traffic club is the perennial question about which controls traffic—service or rates. Actually, there is nothing to argue about. The larger the rate differential, the less important becomes fast service. Proof: the great growth in recent years of slow barge transportation for even sensitive "manufactures and miscellaneous" traffic. In most businesses where high perishability is not controlling, carrier service is simply something to be equated against the cost of inventory, insurance, and the risk of demand changes. If the transportation rate is low enough, it becomes smart business to pump more goods into the "pipeline."

The railroads ought to give as good service as is consistent with economical railroading—and such service they frequently fail to give. But the railroads' real strength lies in their cost advantage; and to attempt to compete with trucks only on a basis of service is to buy a gold brick.

Wee Willie Keeler of the old Baltimore Orioles used to advise: "Hit the ball where they ain't." The late Babe Ruth sloganized "Hit 'em where they ain't never been." The railroads have it within their power to "hit 'em where they can't never git."

TAILBOARD side of new express terminal has space (left foreground) for unloading 13 vehicles simultaneously, while the loading area (background) will accommodate 60 trucks.

AT PHILADELPHIA . . .

Latest in Express Terminals

Facility built by PRR for use by Railway Express Agency makes use of powered and gravity conveyors in expediting handling of merchandise

Flexibility in the handling of merchandise by mechanical means is a major feature of a new $2 million express terminal now in operation at Philadelphia.

Designed specifically for use by the Railway Express Agency, and built by the Pennsylvania, the new terminal includes a two-story-and-basement reinforced-concrete office building and two covered platforms. It replaces the old express terminal formerly located at Eighteenth and Market streets, which has been torn down to make way for the full development of Philadelphia's new Penn Center project. Strategically situated at lower Thirtieth and Walnut streets, the new terminal is immediately south of the Pennsylvania's Thirtieth Street passenger station and adjacent to the New York-Philadelphia-Washington main line.

Aside from benefits derived from the utilization of new methods and handling techniques and the use of equipment in speeding up the processing of express shipments, the changeover to the new facility, it is reported, immediately improved these unfavorable conditions prevailing at the old terminal:

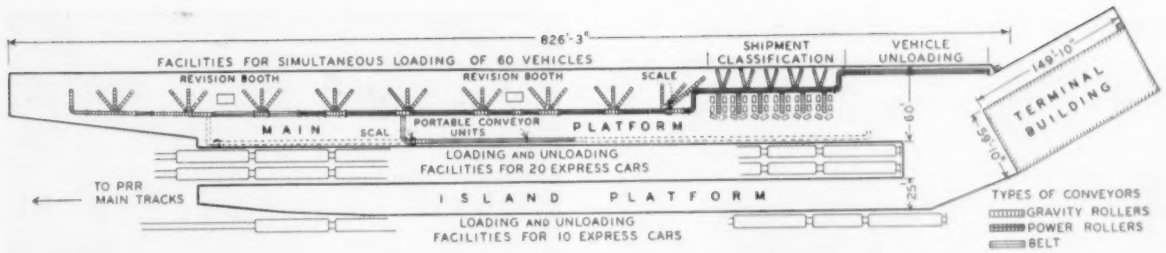
(1) Operations were centered in and around heavily congested traffic areas.

(2) Vehicle hazards and operating limitations were imposed by the structural layout of the old terminal.

(3) Two-level terminal arrangement required continuous shuttling and multiple handling of express shipments between upper and lower platforms.

Office Building Included

The new express facility has 118,547 sq ft of working space. The office building, 150 ft by 60 ft, houses both terminal and operating personnel and accounts for 34,000 sq ft of space, while the platform area totals 82,500 sq ft. The operations office is on a mez-



CONVEYORS of several types, including gravity and powered belt and roller units, are used in combination to promote efficiency and flexibility in handling both inbound and outbound shipments.

zanine floor, suspended over the head end of the platform, and provides the remaining 2,047 sq ft of operating area.

The basement, 200 ft by 80 ft, provides storage space for on-hand shipments and for the terminal's records and supplies. A maintenance shop, an auxiliary warm room, a lunchroom to accommodate 300 employees and an adjoining locker room, equipped with 700 full-length clothing lockers, are also located in the basement.

The first floor includes an office area for the terminal's receiving department for rail and air express shipments, the on-hand office, drivers' settlement room, and the credit union office. Other facilities on this level include a repair room, refrigeration room and the warm room—used to protect shipments of animals and perishables from extreme temperatures. The terminal's security force, timekeeper's office and vehicle call department are also on the first floor.

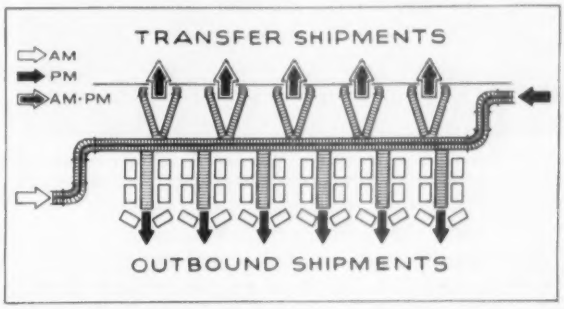
The building's second floor houses the superintendent and his administrative personnel, including the supervisors of terminals and vehicles and their staffs. Also housed on this floor are the transportation department, the cashier, the trace and information departments, and the investigator's office. The telephone room, an employment office, and a conference room complete the second-floor office areas.

Platform and Track Layout

The two platforms are of reinforced concrete and are covered by steel superstructures. The carloading platforms are each 612 ft long. The main platform is 60 ft wide, while the island platform measures 25 ft in width. These structures are separated by two stub-end tracks on which 20 express cars can be readily accommodated. Another track, extending along the opposite side of the island platform, provides space for an additional 10 cars, so a total of 30 cars can be handled at one time at the terminal.

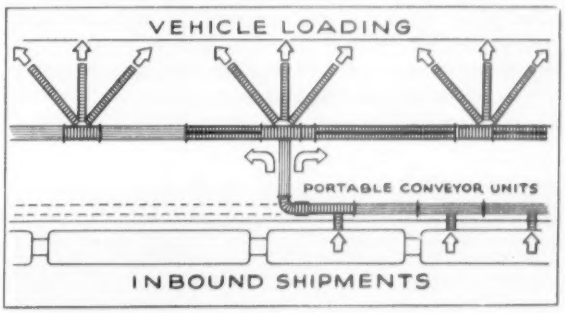
As a safety feature, the platforms are constructed to allow a distance of 3 ft between the platform edge and the sides of the cars. Magnesium dockboards are used to span these gaps. There are two types of dockboards used, one of 1½-ton capacity for lighter loads and one of 4-tons capacity for larger, bulkier shipments. These heavier dockboards are custom built. They have flanged edges and all are equipped with special fastening devices to safeguard them against being moved or shifted while in use.

The street-side vehicle-loading platform has 980 ft of truck back-up space and can accommodate up to



FLOW DIAGRAMS are shown here for the shipment classification section (above) and for handling inbound shipments (below). Outbound traffic, coming from the unloading area to the right of the shipment classification section, is taken from the six fingers (gravity conveyors) and placed on platform trucks for movement to carside. Transfer shipments from both outbound and inbound operations go to the five pairs of V-arranged gravity sections for loading into truck-trailers.

Inbound shipments, placed on gravity sections inside the cars, move to a line of portable belt conveyors and then to the main line of conveyors on the vehicle-loading side of the main platform. Connecting gravity sections place the merchandise in position for loading into delivery trucks.



100 street vehicles at one time. The tailboard side is flanked by a paved driveway 60 ft by 1,100 ft. A vehicle parking lot directly opposite the terminal, including a gasoline station and facilities for washing vehicles, provides overnight storage space for 225 street vehicles.

Intricate Conveyor System

The new facility is equipped with modern materials-handling equipment to help speed the processing and movement of the large volume and wide variety of express traffic that passes through the terminal. An important feature is the intricate conveyor system which, extending almost the full length of the terminal

Route of Outbound Shipments . . .

UNLOADING area, located at the north end of new terminal, is served by powered conveyor which takes outbound merchandise to . . .

. . . "PICKING AREA" where traffic is placed on gravity rollers for loading into transfer trucks (background) or into platform trucks (left) for . . .

(see layout drawing), consists of 632 ft of power-operated sections and 186 ft of gravity sections. In addition, 46 connecting gravity sections are used in processing conveyorized express traffic for local handling or transfer. Supplementing this equipment are seven sections of power-operated portable belt conveyors which are used, primarily, to unload shipments from incoming railroad cars. Measuring 20 ft in length, each portable unit can be operated singly or in tandem.

Other equipment utilized in moving traffic through the terminal includes 600 rubber-tired, 4-wheel platform trucks with automatic coupling devices, six gasoline-operated Buda tractors and two Towmotor fork-lift trucks. To expedite the weighing of express shipments while being processed, the terminal is equipped with three portable Fairbanks conveyor scales—each of 500 lb capacity—and a 2,000-lb capacity Fairbanks platform scale for heavier bulk shipments.

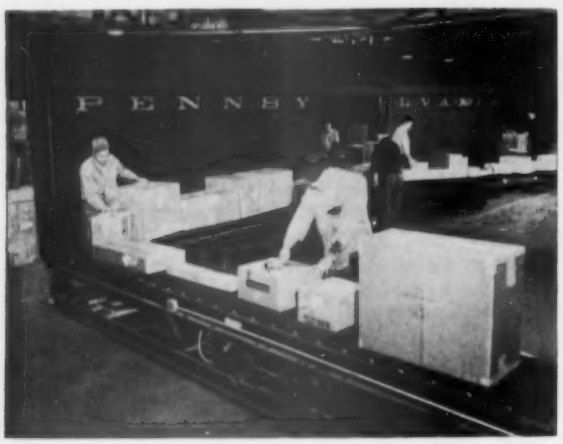
For the protection and care of perishable traffic the terminal's refrigeration room is equipped with two Flakeice ice-making machines, which have a daily capacity of 7½ tons. Storage space for perishable shipments is also provided in the same room.

The storage and dispensing of sawdust—used to protect "dry" freight from seepage from wet or perishable shipments—is handled from a bin above the platform at the head end of the rail tracks, which has a capacity of two carloads. Four large steel hoppers, suspended from the bin and equipped with swing-back doors, dispense sawdust as required. A blower mounted on the terminal roof syphons sawdust from cars, dropping it into the storage bin.

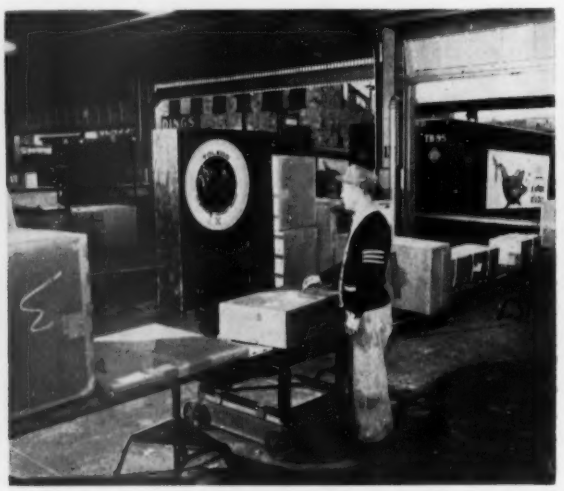
How the Terminal Operates

Two primary operations keep terminal activities going 24 hours a day. First is the outbound phase which begins at about 3 p.m. and continues up to midnight.

Route of Inbound Merchandise . . .



INBOUND shipments are placed on 20-ft portable, power-operated belt conveyors which can be connected separately or in tandem style to the main conveyor system.



WEIGHING of inbound traffic is by portable conveyor scales inserted into conveyor line. Shipments then move to main conveyor artery (background).

. . . MOVEMENT in trains to railroad cars. Overhead hoppers dispense sawdust for protection of "dry" merchandise from seepage coming from wet or perishable shipments.

Second is the inbound phase which commences shortly after midnight and extends to approximately noon. Peak operating periods for the respective operations are from about 7 to 10 p.m. and from 7 to 10 a.m.

An additional phase of the express terminal operations—handling and processing the transfer portion of incoming and outgoing shipments—is automatically set up during both periods of activity.

Toward the end of each business day the Agency's street vehicles trek back to the terminal to unload traffic picked up along the 81 routes in Greater Philadelphia. These vehicles back into the vehicle unloading area.

Shipments on these trucks are unloaded by the drivers and placed on the "take-away" section of the terminal's powered main conveyor line. This section of the conveyor will accommodate cargo as it is unloaded from 13 vehicles simultaneously.

Assorters, who line the initial section of the power conveyor, "mark" the shipments with chalk for some 45 primary separations based on geographical destination. During the peak operating period as many as 2,400 pieces per hour can be handled on this live roller line. The traffic moves at 100 ft per min in a continuous flow.

Prepaid outbound shipments that have to be weighed are dispersed down any of eight 10-ft gravity sections connected to the powered conveyor line in the unloading area. After weighing, these shipments are placed back on the conveyor for processing.

Outbound express shipments moving on the powered conveyor travel around an "S" section in the conveyor to enter the shipment classification section or "picking area." Here marked shipments are distributed over the proper connecting gravity sections depending on whether they are destined for outbound movement or transfer.

Traffic earmarked for outbound rail lines is shunted onto one of six 42-in. wide gravity fingers and placed on 4-wheel platform trucks. Strings of these loaded trucks are then made up and transported to the sides of the proper cars by gasoline-operated tractors.

Outbound transfer traffic—express shipments for other local rail terminals and for over-the-road movement to nearby REA offices in New Jersey and Pennsylvania—is diverted from the main conveyor line, to the right, or vehicle platform side, at the classification section. These shipments are loaded directly into as many as 10 truck-trailers at one time, via five pairs of gravity sections arranged in V-shapes which extend from the main conveyor line to trailers at the platform edge. Portable conveyors, extending into the trailers, are coupled to the gravity sections and facilitate the loading of the larger trailers.

Handling Inbound Traffic

Shortly after midnight, the bulk of the terminal activities switch from the outbound movement to the handling of inbound shipments which arrive in express cars brought into the terminal from the PRR's New York-

MAIN CONVEYOR delivers shipments to "fingers" of gravity sections which place them into position for loading into delivery trucks.

DOCK BOARD shown here, specially designed and made of magnesium, has a capacity of 8,000 lb. Another type has capacity of 3,000 lb.

Philadelphia-Washington main line. This phase of operations brings into play the entire terminal-long conveyor system including the seven 20-ft portable belt units. All inbound express shipments must be weighed, marked and assorted for the 81 local delivery routes and for inbound transfer to other local rail terminals and REA offices serviced by over-the-road truck routes.

Incoming rail cars are spotted on the track adjacent to the main platform for unloading. Seven 20-ft portable belt-conveyor units, which can be operated singly or in tandem fashion, are rolled into position at carside. Portable gravity sections placed in the cars enable the men to feed shipments directly onto the belt conveyor connected to the terminal's main materials-handling artery.

The portable belt-conveyor units can be set up to feed unloaded shipments into the main conveyor line at almost any point along the terminal's main platform. As many as three full-sized rail cars can be worked at one time. By inserting additional gravity sections and a conveyor scale in the portable line, employees can weigh and mark shipments for city delivery routes or transfer vehicles as they move over the rollers.

Inbound traffic delivered to the main conveyor line can be routed in either direction for its proper distribution point from the terminal. The main powered units on the conveyor line can be operated in either direction, according to the need.

Philadelphia shipments move down the main conveyor line to the local delivery area where they are dispersed over 28 connecting gravity sections serving the 81 local delivery routes. Assigned checkers then process shipment way bills and prepare traffic for truck loading and final delivery.

Pricing and the assessment of charges on collect shipments are performed by employees housed in two "revision booths" on the main platform in the local delivery area. These rectangular booths, which are 25 ft by 8 ft, also accommodate vehicle dispatchers.

After shipments have been priced and checked they are loaded into vehicles for delivery to consignees. This area of the vehicle-loading platform accommodates 60 REA trucks at one time.

Inbound transfer traffic destined to other local rail depots and REA over-the-road truck routes travels on the main conveyor line in the opposite direction and leaves the facility from the shipment classification area as in the outbound operation.

Communication System

A two-way electronic central-control communications system blankets the entire terminal, maintaining immediate contact between all departments and areas inside and outside the facility, including the adjacent vehicle parking lot. On-the-spot assignment changes requiring the moving of personnel from one location to another, can be made quicker through the terminal's communication network. Depot equipment can be shifted at a moment's notice, from one job to another. Since special remote-type stations are located strategically throughout the terminal, replies to calls are made from a distance by speaking in the direction of the nearest talk-back speaker. Calls thereby are received and answered without personnel leaving the working area.

1. VISITORS—A president's day includes many of them. Here President Hungerford is going over one of the Frisco's radio programs with a news commentator.

What Does a

For example, consider the case of Clark Hungerford of the Frisco

Part 5 of a series on
CONTEMPORARY
RAILROAD MANAGEMENT

This article continues an analysis of contemporary railroad management — its goals, methods and outlook—presented as a case history of the Frisco. The first article in the series appeared in the May 3 *Railway Age*.

The president of a railroad is, in the final analysis, responsible for the overall results of the whole operation.

Although the Board of Directors sets policy and determines the general course it expects the company to follow, most boards give the president complete control over day-to-day operations and the selection and training of company officers. How each president carries his responsibility, exercises his authority, and follows his beliefs of good management has a strong influence on how successful a company is, and how effectively it carries out its regular operations.

2. DIRECTORS' MEETINGS—They may involve trips to major cities along the line. Here the Frisco board inspects a steam locomotive donated to the park board in Memphis, Tenn.

3. INSPECTION TRIPS are frequent. The train sheet on the dispatcher's desk is often a good clue as to how trains are running and traffic is being handled.

President Do?

The St. Louis-San Francisco is an average railroad, and fairly typical of the industry. It has an aggressive and apparently effective management. And the "pattern" and "tone" of its daily operations clearly reflect the ability, personality and interest of its president, Clark Hungerford.

Mr. Hungerford might be dscribed as a "strong" president. Although he has delegated a large amount of his personal authority and responsibilty to his principal vice-presidents, his thinking, skill in railroad operation and management of people, and good taste are everywhere evident on the railroad.

For example, Mr. Hungerford personally believes in the efficacy of pleasant and efficient surroundings for encouraging office and shop employees to work more efficiently and intelligently.

Modernization of Facilities

Like many other railroads, the Frisco has been gradually replacing outmoded and inefficient shops, offices, and other facilities. Although the Frisco's buildings are of

A President's Job

The continuous round of conferences, speeches, luncheon meetings and trips in which the average railroad president operates variously as a salesman, a special pleader, or as a top authority in important matters of business may seem like an easy life. For most, it is not. The hours are long; the incessant traveling is very tiring. Further, these activities eat into evenings, Saturdays, Sundays and holidays to the point where he gets little time to himself and family.

The tasks of a railroad president are many and varied. He must:

1. Be sure the company earns a profit for the stockholders.
2. Provide fair employment and compensation for employees.
3. Provide a service customers want and will buy.
4. Superintend the raising of funds to finance operations.
5. Maintain a smooth-working organization, and settle such intramural fights and squabbles as may develop.
6. Maintain good relationships with the general public and local governmental organizations—including railroad regulatory bodies.
7. Function as a "super salesman" in the solicitation of difficult and important customers, and in fostering industrial development in the areas served by his road.

4. INVENTORY CONTROL—Should the Frisco build up its stores, or seek to reduce existing inventories? Such questions are discussed in the course of an inspection of the stores building at Springfield, Mo.

6. SEEKING NEW BUSINESS is a constant responsibility. Here president Hungerford chats with the governor of Mississippi, Hugh M. White, at a meeting in the state capitol on the subject of state-wide industrial development.

7. EMPLOYEE ACTIVITIES are important for personal contacts. This informal talk is at the annual meeting of correspondents of the company's employee publication, "All Aboard."

5. IMPROVEMENTS are always in progress. This newly rebuilt radio-equipped caboose incorporates some design changes to be inspected before it goes into service.

simple, economical design, they are decorated and furnished in such a way as to make them more attractive and pleasant than most railroad offices. The effect on employee morale is readily apparent.

One measure of a president is the kind of men he selects and trains to be on his team as his chief assistants and, in turn, how they select and train their staffs. Mr. Hungerford himself is an operating man who rose through the operating department of the Southern and became vice-president of operations of the Association of American Railroads before joining the Frisco. On the Frisco he has concentrated on the development of a strong "first team."

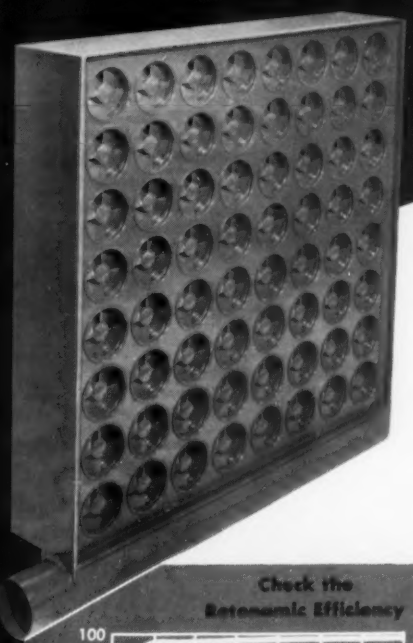
He has done this by giving the men he considers competent complete departmental authority and responsibility. In other areas where strong leadership is not evident he maintains closer personal control. However, he makes it a point to keep constantly informed on daily operations and problems. The road's vice-president of operations, in turn, has been unusually successful in building a strong team by careful training and by giving each man the maximum authority and responsibility in his particular field he can carry effectively. The unusual activities of the Frisco in the maintenance-of-way department, in freight station planning and in training operating personnel are clearly products of this policy.

Like other railroads, the Frisco has its weak spots. One big current problem involves the car shops, which are old. Although maintenance is fully adequate costs are high. Mr. Hungerford and his staff have been devoting much time to this problem, evaluating the current practice of paying labor on a piece work basis, and considering whether new shops should be built—and if so, where and of what design, and should provision be made for building new cars as well as handling regular maintenance? Once all studies and reports are in, it will be Mr. Hungerford's task to decide upon a course of action and carry it to the board of directors for approval.

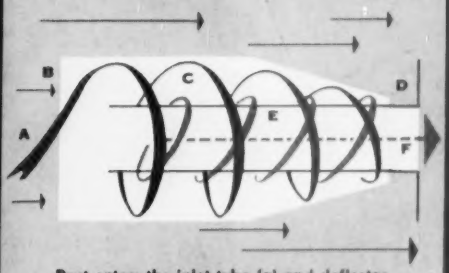
so NEW

so REVOLUTIONARY

YOU'LL BE AMAZED!

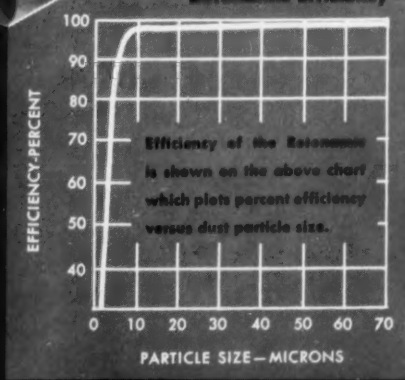


Here's the Rotonamic Principle



Dust enters the inlet tube (a) and deflector vanes (b) set up a cyclonic action. While traveling along the primary chamber (c) dust particles are centrifuged towards the walls and carried into a special dust bin at (d) by the 10%-Bleed-off air. The remaining 90% of the air reverses direction, spirals back along the discharge tube (e) centrifuging the remainder of the dust. Clean, filtered air reverses direction once again and exits at (f). The dirt laden air is discharged to atmosphere.

Check the Rotonamic Efficiency



As advanced and different as the first FAR-AIR high velocity filter, the Rotonamic is the latest important development in air filters. It operates with constant high efficiency over a wide range of dust concentrations, requires no maintenance, never loads with dirt. Handling 1200 cfm at 4.6" wg pressure drop in a 20 x 20" face area, Farr Rotonamic is the most economical solution to engine air cleaning.

For complete information write to P. O. Box 45187, Airport Station, Los Angeles 45, California.

ANNOUNCING THE FARR

Rotonamic

AIR CLEANER

. . . a compact, highly efficient panel-type unit that requires no oiling and is self-cleaning!

FARR—the pioneer developer of the first high velocity air filter whose performance became the standard of the Railroad industry—proudly announces the ROTONAMIC. This new device operates on the principle of centrifugal air cleaning. After years of development and rugged road testing under all dust conditions on several major railroads, the ROTONAMIC has a record of proved efficiency, greater safety factor for extreme dust concentration, and lower maintenance costs.

ORIGINATORS OF FAR AIR CERTIFIED FILTER SERVICE

FARR COMPANY

NO COMPROMISE ON QUALITY

Los Angeles, New York, Chicago,

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THE MILWAUKEE ROAD

C&O FOR PROGRESS

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Santa Fe

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SEABOARD AIR LINE RAILROAD

ERIE

MINNEAPOLIS & ST. LOUIS RAILWAY

MAIN LINE Rio Grande

SAFETY FIRST DULUTH MISSABE AND IRON RANGE

GO T&P

UNION PACIFIC RAILROAD

$4.98 keeps a million-dollar

A luxury streamliner roars through the black, rainswept night at 80 miles an hour. Somewhere ahead there's a 40-mile curve. How much advance warning will the engineer have? Suddenly . . . a yellow flash far ahead . . . seconds later a legend "40" bright and clear. The throttle goes forward; the brakes take hold. The train eases smoothly and safely into the curve. How? Because the speedboard was reflectorized with "Scotchlite" Sheeting—the brilliant material that's visible at night ½ mile away. Why? Because this road's management felt that $4.98* was little enough to invest to keep its million-dollar trains on the track as well as on time.

Round-the-clock visibility!

Wide Angle Flat-Top "Scotchlite" Sheeting gives your signs true shape, true color and true legend by night as well as by day. It is as effective in foul weather as in fair—even in extremely heavy rain. Practically maintenance-free. Eliminates the need for refinishing signs in the field.

**4.98 is the average cost of a speedboard produced by this major road in its Central Sign Shop.*

America's leading railroads protect their trains and crossings with "Scotchlite" Sheeting

CENTRAL SIGN SHOP of the Frisco Railroad at Springfield, Missouri

SANTE FE'S Central Sign Shop is located at Albuquerque, New Mexico

AT MILWAUKEE is the Central Sign Shop for the Milwaukee Road

train on time...and on the track!

Why 15 Class 1 roads produce reflectorized signs with the central sign shop method

15 American railroads now use the Central Sign Shop method to produce reflectorized signs at less cost. Briefly, their method is this: all reflectorized sign production is handled in one central location. High-speed vacuum application equipment makes it possible to produce far more signs in less time than by conventional sign making methods. And, of course, there are savings in stock, in space and in labor costs with the Central Shop system.

Let us show you how you can quickly convert your present sign-making facilities to the more efficient, more economical Central Shop method. We'll be glad to send you complete information, including layout for a model shop. Just mail the coupon.

FOR SHAPE . . . COLOR . . . LEGIBILITY

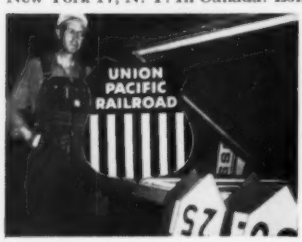
Reg. U. S. Pat. Off.

SCOTCHLITE

BRAND

REFLECTIVE SHEETING

The term "Scotchlite" is a registered trademark of Minnesota Mining and Mfg. Co., St. Paul 6, Minn. General Export: 122 E. 42nd St., New York 17, N. Y. In Canada: London, Ontario, Canada.



UNION PACIFIC operates this Central Sign Shop at Evanston, Wyoming

FREE SHOP PLAN!

MINNESOTA MINING AND MFG. CO. (RA-104)
St. Paul 6, Minn.

Please send me complete information, including floor plan, for establishing a Central Shop to make reflectorized signs. I understand there is no cost or obligation.

NAME.....

RAILROAD.....

ADDRESS.....

Me – I could write a buyer's guide!

When it comes to equipment, you can't fool maintenance men. They know what stands the gaff—and what doesn't. They also know a lot of their work is due to faulty selection of equipment —mistakes in judgment of quality, mainly.

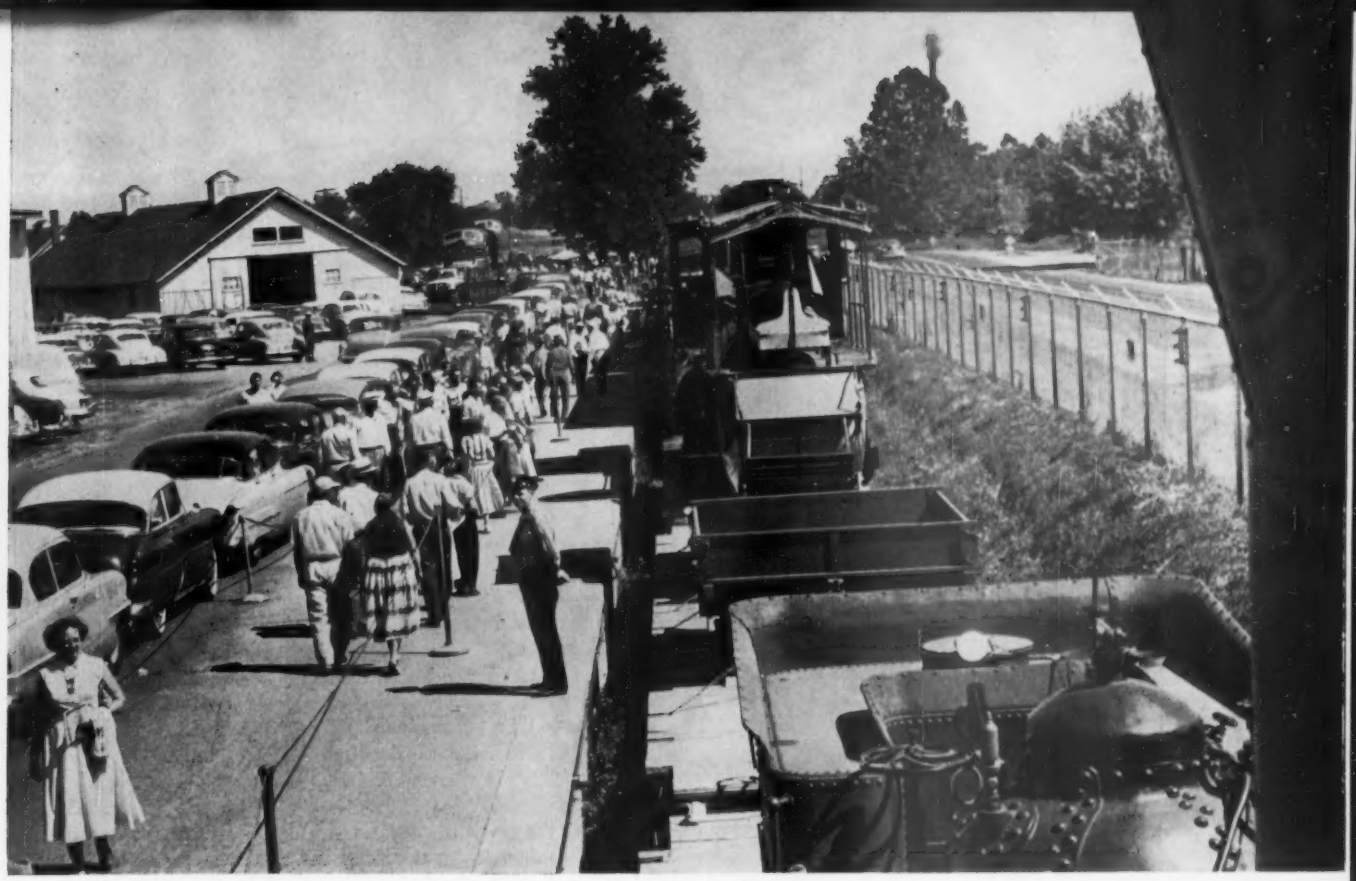
In buying valves, such mistakes usually happen when someone buys on price alone, or because "all valves look alike." In either case, today's penalty is excessive maintenance at the highest labor rates in history. And where valve trouble causes production loss, it, too, was never costlier.

Standardizing on Crane valves eliminates a lot of mistakes, and it's the thriftiest habit in piping equipment buying. Better Crane quality and bigger selection assure it.

Crane Co., *General Offices: 836 S. Michigan Ave., Chicago 5, Ill. Branches and Wholesalers Serving All Industrial Areas.*

CRANE

VALVES • FITTINGS • PIPE • PLUMBING • HEATING



OLD railroad rolling stock on exhibition at the nine-day Indiana State Fair drew large crowds.

Railroads "Steal the Show"

. . . AT INDIANA STATE FAIR

Reports from Indiana indicate that nine railroads "stole the show" at September's big 1954 Hoosier State Fair at Indianapolis.

With "Transportation—Its Role in the Growth of Agriculture and Industry" as the theme of the huge agricultural exposition, the major carriers serving Indiana put on what the State Fair Board characterized as "one of the finest and most interesting exhibits ever seen at an Indiana State Fair."

The roads—Baltimore & Ohio, Chesapeake & Ohio, Erie, Illinois Central, Monon, New York Central, Nickel Plate, Pennsylvania and Wabash, plus the Electro-Motive Division of General Motors Corporation—combined their efforts to present the biggest "railroad panorama" in the history of Indiana. The exhibit was sponsored jointly by the Railroad Community Committee of Indianapolis and the Tri-State Railroad Community Committee of Fort Wayne, both representing the Eastern Railroad Presidents Conference.

132,000 Visitors

During the nine-day fair, 132,273 persons visited the exhibit, which featured 19 pieces of modern passenger, freight and diesel equipment, and five antique units. This represented 23% of total fair attendance. An eight-car, modern air-conditioned passenger train alone drew

NEW railroad equipment, too, received a thorough going over by some 132,000 visitors.

A SHARE OF STOCK was given by each of the nine participating railroads to boys and girls selected by chance from registration slips signed at this booth.

101,017 persons, or 18% of total fair attendance. A 1,750-hp diesel locomotive, shown by General Motors, attracted 70,683.

The fair board, as a tribute to the major role railroads have played in the development of Indiana agriculture and industry, set aside one day, September 8, as "Railroad Day." On that day alone 15,550 persons filed through the passenger train.

Stocks and Rulers

The nine participating carriers presented several novel features to highlight their exhibit. Perhaps outstanding was the awarding of a share of stock in one of the roads to each of nine Hoosier boys and girls of high school age or under. More than 45,000 children registered for the stock, with parents registering for youngsters too young to write their own names. On the last day of the fair, winners were drawn by lot. Their ages ranged from one to 17 years.

Two days later, seven of the nine winners were brought back to Indianapolis, where their certificates of stock were presented by Emil Schram, of Peru, retired president of the New York Stock Exchange. Presentations were made during a 15-min program on an Indianapolis television station (WFBM-TV), which has a potential audience of more than a million listeners.

Another feature was the distribution of some 46,000 12-in. steel rulers with this message printed on each: "A good rule to follow. Use the railroads of Indiana. Taxes paid by Indiana railroads educate 32,000 students every year."

Nearly one million pieces of railroad literature, provided by the Association of American Railroads, were distributed to visitors.

On "Railroad Day," 200 gatemen, traffic men, members of the press and radio corps, and members of the State Fair Board wore engineer's caps with a large red and white button pinned on the crown and reading "Railroad Day."

While thousands marched to the railroad track exhibit nearly a mile from the center of the huge fairgrounds, thousands of others witnessed films of each of the participating roads shown in the Indiana University Auditorium. Fair officials said more than 12,000 persons saw the films.

Still another feature of the overall panorama was the showing of the $25,000-model HO gage train owned by the B&O, which attracted more than 100,000 persons in the Women's building. To help point up the part railroads as a whole have played in development of agriculture, the B&O consented to have special model freight cars constructed, each with a separate insignia of a participating road.

Everybody Was Happy

Gilman Stewart, president of the State Fair Board, lauded the carriers and Electro-Motive for sponsoring the big track exhibit. "The railroad panorama," he declared, "was a great asset to the 1954 fair. Although the track display was located far from the heart of the fairgrounds, thousands nevertheless saw fit to walk over and see the show. This certainly is a tribute to the railroad industry. We hope the railroads will consider coming back next year with another fine display."

William H. McKitrick, superintendent of the Indianapolis Union, and chairman of the Indianapolis community committee, said the attendance was "most gratifying." "It exceeded our fondest expectations," he declared. "The railroad industry is indebted to the State Fair Board for inviting us to present the exhibit to help carry out the 'Transportation' theme of the fair."

Literally scores of fair visitors who attended the railroad show said they had never been on a passenger train. Many Indianapolis school teachers took classes to the fair and its railroad show.

James Buckley, Monon representative, said he explained the family-rate plan to scores of families as they filed through the passenger equipment. Most of them, he said, had never heard of it.

A Pullman Company representative on the Nickel Plate's "City of Indianapolis" Pullman car said: "I've never seen so many people in one place since the World's Fair in Chicago!" Many women going through the car said they had "no idea" railroads today offer such convenient overnight accommodations.

The panorama and the tremendous job the railroad industry has done in the growth of Indiana also were lauded editorially by several Hoosier newspapers, as well as by radio and television stations, which gave liberally of their time as a public service to advertise the exhibit.

The Indianapolis News described the display as giving "a graphic demonstration that railroads are keeping up with the times." The Indiana University Daily Student said editorially, "The lesson of the panorama is that the railroad always has, and continues today, to play a vitally important part in the state's as well as the nation's transportation system."

TRAIN MOVEMENTS are authorized by signal indication without train orders.

Why Cotton Belt Installed CTC

To increase capacity of 429 miles of busy single track, management decided to install modern signal system rather than add second main track

The benefits of centralized traffic control on extensive sections of single track, not previously equipped with automatic block, are being demonstrated on the St. Louis Southwestern. This railroad made its first installation of CTC in 1943 on 47 miles between Illmo, Mo., and Dexter, and has been extending this system as fast as practicable for several years, so that about 429 miles are now so equipped in one continuous section.

The StLSW specializes on fast freight service. The "Blue Streak," a fast freight train leaving St. Louis each evening, gives next morning deliveries in Fordyce, Camden and Texarkana, and second morning deliveries in various cities in Texas, including Dallas and Fort Worth. Where curves and grades permit, the maximum speed for freight trains is 60 mph.

Back in 1942, the section between Illmo and Dexter Junction handled up to 50 trains daily. On this section, the schedules now include 2 passenger trains, 14 through freights and a local each way daily except Sunday. Extra trains bring the total to about 22 trains daily.

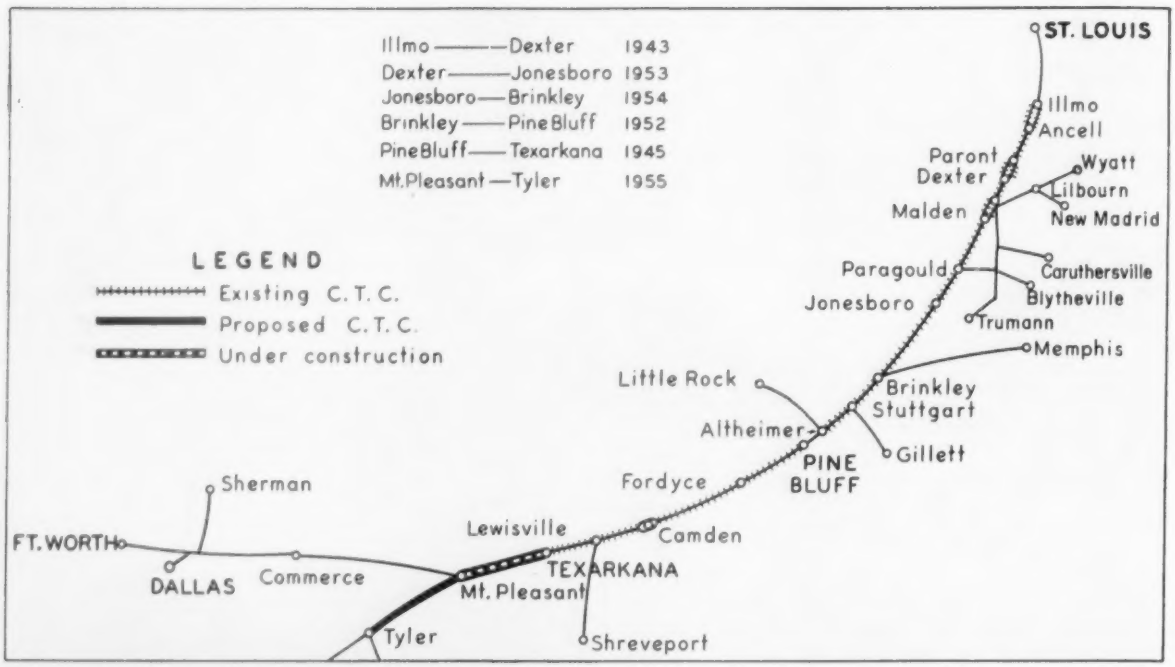
On the section between Dexter Junction and Paragould, the schedules include 2 passenger trains, 12 through freights, and the local freight each way. Thus, including extras, there are about 18 to 20 trains. On the section between Paragould and Pine Bluff, the schedules include 2 passenger trains, 10 through freights and the local freights. Between Pine Bluff and Texarkana, the schedules call for 2 passenger trains, 8 through freights and the local freights.

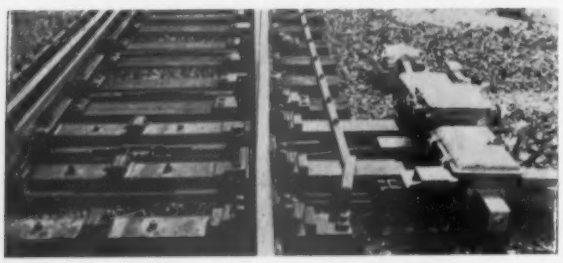
The principal lines of this railroad connect St. Louis with important cities in Arkansas, Tennessee, Louisiana and Texas. Double main track extends 7.3 miles from Illmo to Frisco Jct., 3.1 miles from Paront to Dexter Junction, 5.4 miles through Malden, and 2.0 miles through Camden, totaling about 17.8 miles of double track. Otherwise the entire 618 miles between Illmo and Dallas, as well as 196 miles between Mt. Pleasant and Waco, is single track main line, handling through traffic.

Two Far-Sighted Decisions

Prior to 1941, train movements on this railroad had been authorized by timetable and train orders, and no automatic block signaling was in service. When faced with increased traffic, and the necessity to get trains over the road in shorter time, the management in 1942 made two important decisions that not only proved to be correct but also were forerunners of developments that are widely accepted today.

These 1942 decisions were (1) not to add second main track, but to secure increased capacity of the existing single track. The management knew that the installation of automatic signaling alone would improve safety, but would necessitate the continued use of timetable and





SIDING SWITCHES are operated by power machines.

train orders. Therefore, a further decision was (2) to improve the single track by installing a complete system of centralized traffic control, including power switch machines and signals for authorizing train movements.

The first CTC project, completed in 1943, was on 32 miles of single track and 15 miles of double track, between Illmo and Dexter Junction, where traffic had increased to 60 to 65 trains daily. Other sections were equipped with CTC as fast as practicable, preference being given to sections where operations were affected by grades, curves and other local conditions. For example, on the 152 miles between Pine Bluff and Texarkana, the railroad crosses four major rivers, and traverses some rough country including curves up to 4 degrees, and grades up to 1.17 per cent. Accordingly, this 152 miles was the second CTC project, being completed in 1945.

Because of shortages of men and materials, the program was delayed for a few years, but in 1952 CTC was completed on 68 miles between Pine Bluff and Brinkley; in 1953 on 84 miles from Dexter to Jonesboro, and in 1954 on 74 miles from Jonesboro to Brinkley. Construction of CTC is now under way on 60 miles between Texarkana and Mt. Pleasant. A further extension from Mt. Pleasant to Tyler, 68 miles, is contemplated for 1955. This program is proof that the CTC has been successful in attaining the benefits as foreseen by the management of this railroad in 1942 from the decision not to add second track, but to improve the existing single track by installing CTC.

The division headquarters, including the dispatcher's offices, are in a new brick building at Pine Bluff. One CTC machine controls the 132 miles between Illmo and Jonesboro; a second machine controls the 142 miles between Jonesboro and Pine Bluff; and a third machine controls the 152 miles between Pine Bluff and Texarkana.

During the past 10 years, numerous changes have been

HEAVY TRAFFIC OF TWO RAILROADS COMBINED

Between East St. Louis and Thebes, 121 miles, the St. Louis Southwestern and the Missouri Pacific operate jointly over tracks of the MP in Illinois. The bridge across the Mississippi river at Thebes, and the tracks between Thebes and Illmo, 3 miles, are owned jointly by the two roads. Between Illmo and Dexter Junction, 47 miles, the MP and the StLSW operate jointly over StLSW tracks. From Dexter, the MP has a line west for 25 miles to Poplar Bluff, where a connection is made with the direct MP north and south main line from St. Louis through Bismarck to Poplar Bluff, and on south through Little Rock to points in Texas.

The MP direct line between St. Louis and Poplar Bluff via Bismarck includes heavy grades. Therefore, nearly all the MP through freight trains between St. Louis and Little Rock or Texas are routed via Thebes, Dexter and Poplar Bluff. Also, the MP through freights between East St. Louis and Memphis, as well as points in eastern Arkansas and Louisiana, use the low grade line via Thebes, Illmo and Dexter, and then from Dexter south on StLSW track for 63 miles to Paragould.

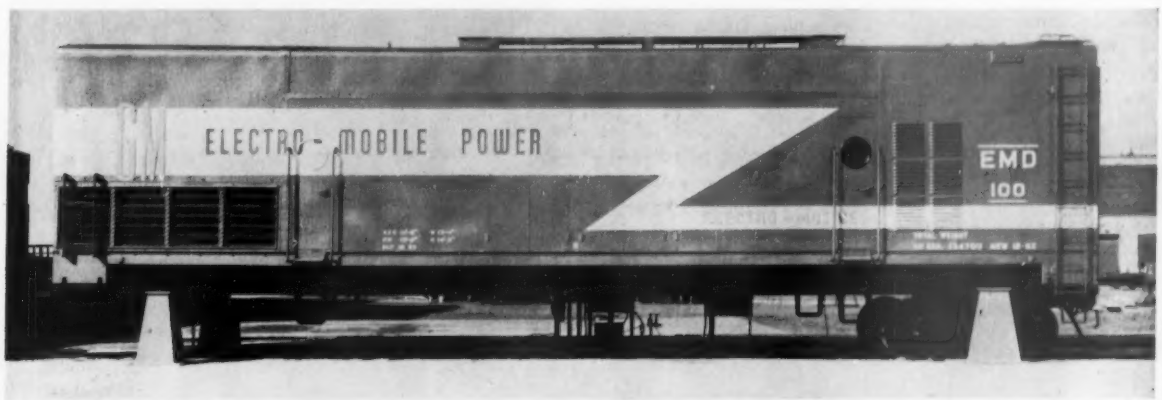
made in sidings. Those to be equipped with power switches and CTC signals were lengthened to capacities ranging from 120 to 160 cars. Short sidings, not needed for meeting or passing trains with CTC, were either removed or converted to spurs for serving freighthouses or industries. The main-track switches left in service with hand-throw stands were equipped with electric locks, controlled by the dispatcher.

Prior to the installation of CTC, this railroad had several lap siding layouts. Studies indicated, however, that with CTC there would be very few instances in which the lap sidings would be used effectively to hold two trains while a third train passed. Therefore, considering the fact that two additional switch machines and signal layouts, as well as new No. 16 turnouts, would be required, the lap sidings, as such, were eliminated. The tracks were thrown to connect the sidings through as one long siding.

Each station-entering signal has two heads. When a power switch is reversed for a train to enter a siding that is unoccupied, the signal can be cleared to display the red-over-yellow aspect. If the siding is occupied by a train of the same direction, the signal can be cleared to display the red-over-lunar aspect. If the siding is occupied by a train of the opposite direction, the signal cannot be cleared to display an aspect to enter.

This project includes some special signaling features, in addition to the conventional installations. For example, there is a double location of dispatcher-controlled "holdout" signals 0.5 miles north of the station at Jonesboro. By controlling these signals to display the Stop aspect, the dispatcher sets up a switching zone through the Jonesboro industrial area, so the local freight crew can be authorized to use the main track for a given time, such as 30 minutes, to service industries in this area, and then get in the clear. In the meantime, a line-up can be made for a southbound through train to depart from Brookland, 8 miles north, and proceed toward Jonesboro. Then, when the local freight leaves the switching area, the dispatcher can clear the southward holding signal for the through freight to go on south without stopping. Thus, time is saved both for through trains and switching.

These CTC projects on the StLSW were planned and installed under the direction of B. J. Alford, signal engineer. The major items of signal equipment were furnished by the Union Switch & Signal Division of Westinghouse Air Brake Company.



NEW GM 1,000-kw diesel electric-power car, designed for use on rail sidings or on piers.

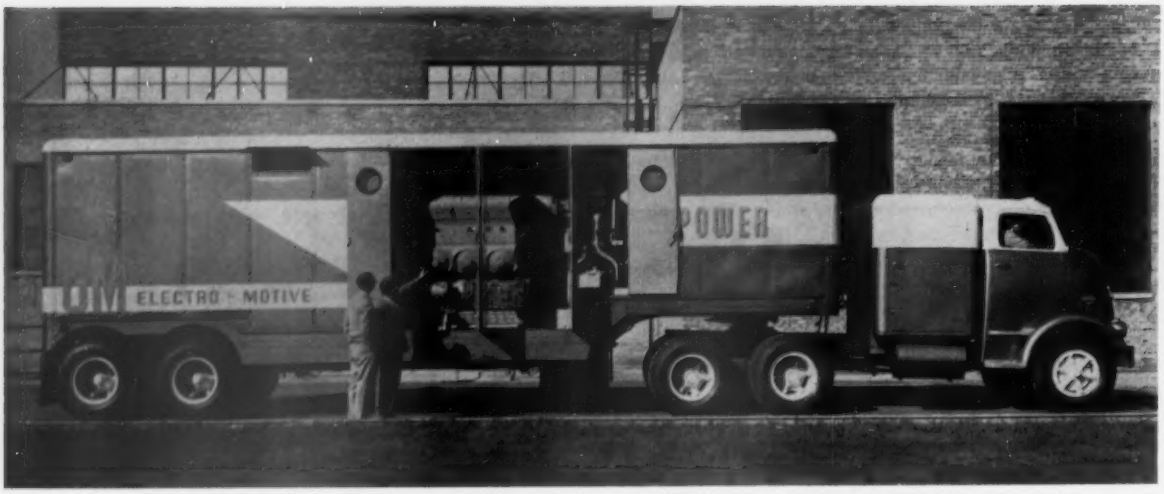
Power Where It's Needed Most

Mobile and portable generating units are now being offered by General Motors in capacities to 1,000 kw for power boosting in fringe areas and emergencies

Railroads are interested in the line of mobile and portable generating units now being manufactured by the Electro-Motive Division of General Motors Corporation. These relatively small automatic power plants were designed primarily for electric power boosting in fringe areas, low-load-factor and emergency situations in the public utility field. They are available in capacities up to 1,000 kw, the larger sizes being mounted in 50-ft power cars which can be moved on rails. They can be operated from a siding to supply power for large construction projects, heavy rail welding or grinding, or emergencies.

Power for the new E-M electric generating units is supplied by standard General Motors 567C diesel engines, available in 6-, 8-, 12- and 16-cylinder sizes to operate a-c generators of 350-, 500-, 750- and 1,000-kw capacity, respectively. The 350- and 500-kw units may be installed in trailer trucks for movement on highways and all sizes may be mounted on bases for semipermanent installation if desired.

These GM 567C series diesel engines are the type ex-



TRUCK-MOUNTED 500-kw generating unit, with doors open to show GM 567C 800-hp diesel engine.

tensively used in railroad motive power, naval and stationary applications. Their lightweight component parts may be easily removed and replaced on a unit exchange basis. Maintenance records indicate that since 1938 constant research has increased piston ring life from 1,000 to 30,000 hours and piston life from 75,000 to 750,000 miles. In spite of rising labor and material costs over the years, the price of E-M diesel locomotives has averaged less than $104 per hp and the new generating units, housed ready to deliver current from the 1,000-kw set, will cost about $90 per kw.

Complete interchangeability of all cylinder power assemblies regardless of engine size is another advantage of the 567C engine. It is well adapted for interim power line boosting because of rapid governor response in a 2-cycle design. At the synchronous speed of 720 rpm, each cylinder fires 720 times a minute.

In developing the GM diesel-electric locomotive, mechanical and electrical engineers, working together, produced an a-c electrical system with a-c motors driving engine cooling fans and traction motor blowers. This eliminated manual engine temperature control and contributed materially to attendant-free operation.

In the mobile and portable power-generating units, an eddy current clutch is used as a variable-speed drive to modulate radiator cooling fan speed and maintain automatically a constant-temperature cooling water supply to the engine. This is accomplished by varying the field current within the eddy current coupling.

Since the eddy current clutch transmits power through a magnetic field, there are no places of wear or requiring maintenance on the coupling except slip rings and brushes. The eddy current clutch was selected because of exceptionally low maintenance requirements.

New Series A Generators

Taking advantage of experience gained in building heavy-duty traction equipment for over 15 years, Electro-Motive has engineered a line of 60-cycle, 3-phase, synchronous generators to operate with 567C diesel engines. The capacity range is 350 to 1,000 kw.

The generators include the A-11 with 1,000-kw capacity (1,250 kva) for operation with 16-cylinder 567C engines; A-7 with 750-kw capacity (938 kva) for use with 12 cylinder 567C engines; A-5 with 350- and 500-kw capacity (625 kva) for use with 6- and 8-cylinder 567C engines. All of these power units are designed to operate at 4,160 or 2,400 volts.

The A-series generators have been designed to withstand a 25 per cent electric overload and are equipped with single, spherical, self-alining roller bearings. Insulation is silicone, glass and mica. A 125-volt d-c exciter is driven through a flexible coupling from an auxiliary shaft on the engine, eliminating the need of belt drive from the generator.

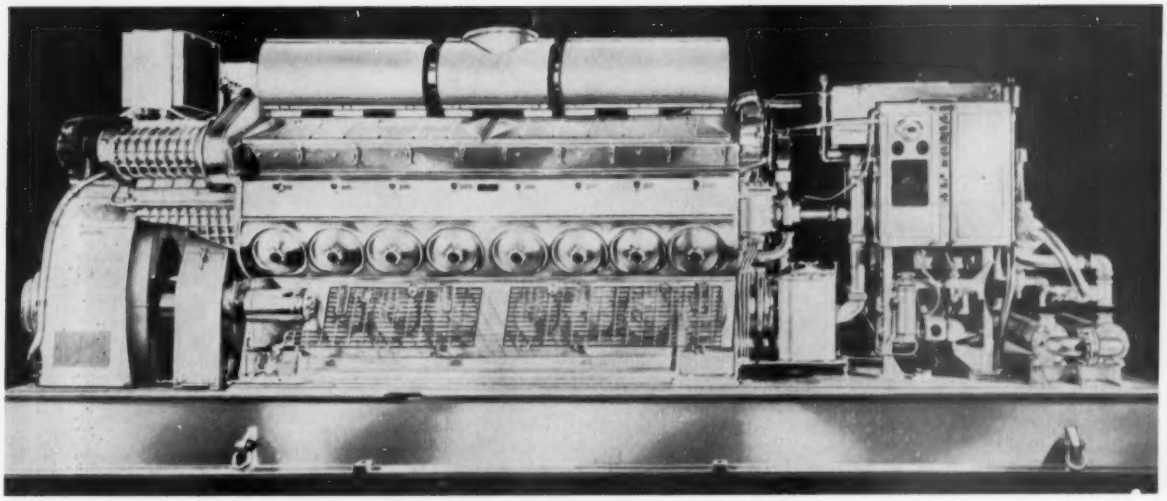
Switchgear for the rail car mobile generating unit is housed in a steel cabinet of standard height and width but less depth, specifically designed for this application. It has shock-mounted doors, provision for automatic control equipment, and a flexible arrangement for meters. Thoroughly tested switchgear equipment includes regulating, metering and protective devices.

Unattended Service

Automatic control, available as an extra on the rail and portable units, is designed to permit operation completely unattended with maximum reliability and minimum maintenance.

On receipt of a starting impulse, given by any of several devices such as radio, telephone, voltage relay, carrier current, or push button, the automatic controls crank the engine to start in about two seconds and accelerate to full speed in three seconds. The generator is synchronized automatically to the line (in frequency, volts and actual phase) and the circuit breaker is closed in 5 to 20 sec. The generator output is increased to full load within an additional 20 sec. The total time from starting to full load is, therefore, approximately 45 sec.

Similarly, a stopping impulse—either initiated by a dispatcher by remote contol or by special controls necessary to meet service conditions—unloads the generator to practically no load within 10 sec. The breaker is tripped automatically and the engine idled for a cool-off interval, usually 3 to 5 minutes, and then stopped.

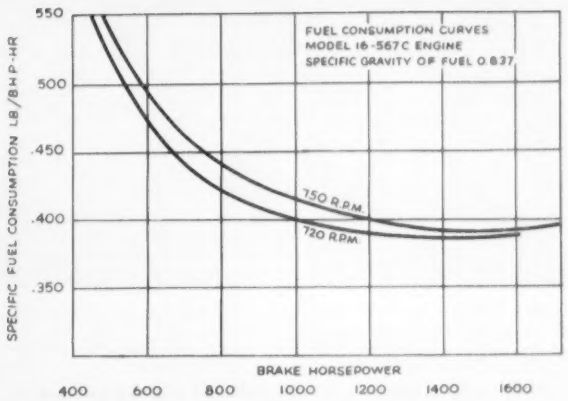


GM PORTABLE electric generating plant of 1,000-kw capacity mounted on rigid steel platform, and easily transported on skids to semipermanent or long-term locations.

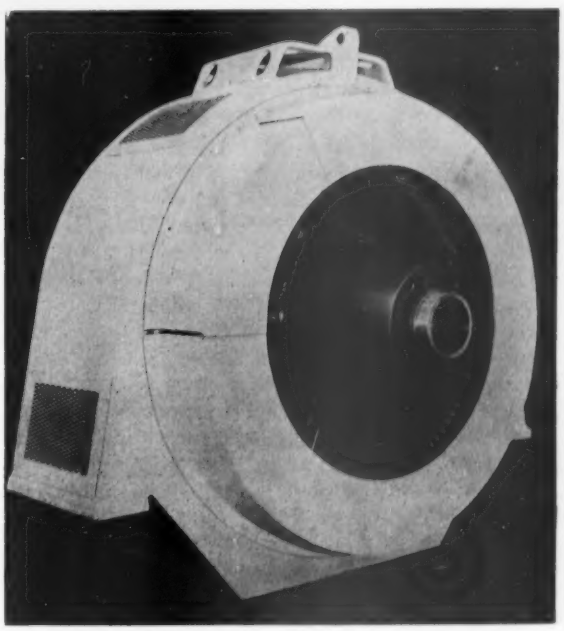
POWER ASSEMBLY (cylinder liner, cylinder head, piston and connecting rod) being lowered into 567C engine.

For movement on railroads, the mobile generating unit in 500-, 750- and 1,000-kw sizes is furnished with steel, sound-proofed hood, embodying removable hatches, and mounted on standard 50-ton freight type railroad trucks. The car also is available without trucks for semipermanent locations.

To meet low noise level requirements for operation in residential areas, Electro-Motive engineers have developed a special manifold, different from that used on locomotives, for silencing exhaust noise, while perforated sound proofing material is used to line the entire car body. For ease in removal of engine power assemblies and other small components, a chain hoist rail is installed directly over the generator and engine.



UNIT FUEL CONSUMPTION of GM567C diesel engine at two speeds.



GM HIGH-EFFICIENCY a-c generator for "Electro-Mobile" diesel-powered electric-generating units.

NEW OFFICERS for 1955 are (left to right), Benjamin D. Branch, secretary-treasurer; president, Fred H. Baird, assistant vice-president, NYC; vice-president, James B. Sharpton, passenger traffic manager, ACL, and chairman of the executive committee, J. N. Findlay, passenger traffic manager, Furness Withy & Co.

How Boost Passenger Business?

Reports at the annual meeting of passenger traffic officers tell of new equipment, offer tips on selling service—Baird elected president for 1955

There is no better approach to increasing railroad passenger business than seeing to it that service has values the public wants, members of the American Association of Passenger Traffic Officers were advised at their annual meeting in Pasadena, Cal., October 10-13. The view was expressed in a report submitted by the committee on ways and means of increasing passenger traffic.

The committee suggested that there still is room for improvement in railroad merchandising, looking toward winning a greater volume of business. It added that experience with family fares in 1954 "would seem to indicate the value of realistic pricing," but too many people continue to be apathetic toward railroad transportation.

Fred H. Baird, assistant vice-president of the New York Central, was chairman of this committee. In the final session of the four-day meeting Mr. Baird was elected president of the association for 1955. He succeeds Claude E. Peterson, vice-president, system passenger traffic, Southern Pacific. Other new officers of the association include J. B. Sharpton, passenger traffic manager of the ACL, as vice-president, and J. N. Findlay, passenger traffic manager, Furness Withy & Co., as chairman of the executive committee.

J. J. Alms, general passenger traffic manager of the Burlington, headed this year's committee on development and improvement in train service and equipment. His report suggested that railroad passenger men look for these cost-reducers: Examine schedules frequently to determine whether excess equipment is being handled; watch dining car and chair car porter assignments, and study the possibility of pooling equipment between railroads. He said he believed more thought should be given to basic car designs, with a view to pooling orders and permitting car builders to reduce unit costs through mass production.

A New Coach Sleeper

Mr. Alms revealed in his report that the Pullman Company is interested in the possibilities of a coach-sleeper and has completed a rough mock-up of such a car. Present thinking is that such a car would have 52 seats by

day and 26 beds by night. A point in its favor would be the versatility, permitting it to be doubled back by day after an overnight trip.

Elsewhere in the equipment picture, Mr. Alms noted that various types of European trains have been studied in the past year. However, he said, a committee of American railroad men who visited Europe found no equipment that rides as well as modern American cars with properly maintained wheels.

"The weight saving in the running gear of European trains is largely offset by the reduced length and increased waste space in the cars at the connections," Mr. Alms continued. "The weight of the equipment is traceable to reduced strength, particularly in relation to protection from sideswipe and other hazards. The interiors are also lighter in strength requirements and equipment for the passenger's comfort is at the very minimum."

Harry Sengstacken, passenger traffic manager of the Milwaukee and chairman of AAPTO's committee on interline tickets and ticket paper, reported that 31 railroads now are using book interline tickets. He said both the Pennsylvania and Pullman Company are experimenting with book tickets using carbonless-type paper. Still other tests with such paper are being planned by the SP and his own road.

Speakers at the Pasadena meeting included A. L. Hammell, president of the Railway Express Agency; Brig. Gen. E. C. R. Lashar, assistant chief of transportation; J. J. Stedem, executive vice-president of Hertz Rent-A-Car System, and Dean Lawrence C. Lockley of the School of Commerce, University of Southern California. Mr. Stedem urged that greater effort be made to sell "rail-auto" travel, which he said is "the best answer to the competition of the intercity motorist."

REA Sees New Threat

President Hammell of REA advised the passenger officers that the next Congress probably will see renewed efforts to repeal the legislation which imposed size and weight limits on parcel post shipments between first class post offices. Mr. Hammell pointed out that the law has had "a very healthy effect" on the express agency, and he said the agency "is going to need a lot of help" in the fight against repeal. Mr. Hammell also discussed REA's program for upgrading its facilities and equipment, and asked for wider use of "name" trains for express movements. He revealed that the agency is studying its rate structure carefully and has gained new business in some areas by rate cuts on specific movements.

General Lasher suggested, in his remarks, that railroad passenger men need to "get out and really sell their product." He said they would always find the military services glad to hear their story.

There are times, naturally, the general said, when the military must buy speed, the same as a commercial customer. But he said the railroads have "good sales points" and he urged that they make special efforts to provide on-time reliability and dependability for military traffic. Give us good clean equipment, too, he said, and it will surely build good will for the rail carriers.

Dean Lockley, discussing the question of who will run tomorrow's railroads, said there are no classrooms that can teach railroading, but railroad men need to have

C. E. PETERSON, vice-president, system passenger traffic, Southern Pacific, and outgoing president of the association, keynoted the meeting on the theme of "help one another and we help ourselves."

a lot of knowledge over and above operating know-how. He urged that carriers try to "feed into" their organizations young men with advanced managerial training.

As to who will actually run the railroads in the future Dean Lockley offered four possibilities—government, labor, professional managers or representatives of the stockholders. The dean, who favors the latter, said it can only be assured if men are found who refuse to be "regulated into quiescence"—men who can find answers to the industry's problems of rigid labor costs, heavy financial burdens, smallest leeway in pricing, over-regulation and obstruction to technical change.

Family Fares Win O.K.

Family fare plans, which had their widest acceptance this past summer, apparently created enough new business for many passenger traffic officers to favor continuing them indefinitely. A five-man panel at the Pasadena meeting explored the subject of whether such fares should be continued. Sole dissenter on the panel was Mr. Sharpton of the Coast Line, whose road, along with other Southeastern carriers, has not adopted the family plans.

A. G. Hilker, passenger traffic manager of the UP, and R. H. Holter, general passenger agent of the B&O, were outspoken advocates of the bargain fares, and both said they could credit them with increases in passenger revenue. Mr. Hilker said his road conducted a survey in June and found more than half the family fare tickets it sold were to people lured in by the plan. He said this "new business" amounted to around $250,000 for the test month. Mr. Holter reported that on the B&O family fares produced $553,000 in added revenue in the June-August period this year, during which time a total of 6,824 tickets, covering more than 16,000 persons, were sold.

AAPTO Plans Centennial

The American Association of Passenger Traffic Officers will celebrate its 100th anniversary next year and a special committee, headed by Mr. Baird, the president, has been appointed to plan for the occasion. The association was founded in March 1855 at Pittsburgh.

John N. Lind
Retiring president

C. L. Denk, Jr.
Newly elected president

T. C. Burwell
Vice-president

Shippers Tell What They Want

- Adequate Supply of Right Kind of Cars
- Fast and Dependable LCL Performance
- Better Results from Clean Car Program

With one eye on peacetime modes of railroad operation and the other on a possible need of mobilization for war, members of the National Shippers Advisory Boards, meeting in Louisville on October 12, 13 and 14, devoted much of their time to analyzing the freight car supply and in devising plans to keep it at a satisfactory level.

Ways and means of encouraging less-carload traffic came in for serious discussion by the nation's shippers as did the problem of clean cars.

The railroads' version of the problems were presented by Richard G. May, vice-president, Operations and Maintenance Department of the Association of American Railroads and by Arthur H. Gass, chairman of the AAR Car Service Division.

Both the shippers' and railroads' spokesmen agreed that more intensive use of cars now in service should be the basic objective and one that shippers and carriers could work out to their mutual advantage. And work on the dirty car problem was conceded to need added stimulus to accomplish a better overall result. A report was made on the progress of the railroads' LCL Research Committee, organized one year ago. It was urged that the study be continued and that shippers, as railroad customers, intensify their interest in the less-carload field and assist wherever possible in returning this type of traffic to the rails.

In preparing for future civilian traffic and for possible military hauls, J. W. Witherspoon, chairman of the association's Car Efficiency Committee, recommended that the National Board direct the 13 regional boards to make a survey to determine, if possible, what type of all-purpose standard box car would best suit the requirements of all shippers—taking into consideration length, width, height, marked capacity, door and floor construction. This survey would be completed not later than July 1, 1955, at which time "a report will be made to the AAR Research Division so that it can submit its analysis at the next national meeting of the National Association."

The committee also recommended that carriers reduce the percentage of cars awaiting repairs to not exceeding five per cent of total ownership.

A third recommendation concerned "bad order" cars. The railroads were asked to adopt a uniform method of notification of cars stopped for 72 hours or more.

Mr. Witherspoon recommended also that railroads acquire more DF or special equipment cars and "publicize their availability to make shippers familiar with their advantages."

Mr. Gass informed the group that the AAR already has a study under way pertaining to the standardization of box cars and felt certain that a method could be devised to notify shippers, on a national basis, of cars delayed for repairs more than 72 hours. In answer to a request for more double-door cars he revealed that over 50 per cent of new car orders are for this type.

In regard to DF and special equipment cars Mr. Gass explained the railroads' position by saying, "the railroads are willing to furnish this type of car but it is urged that the shippers cooperate more than they have in the past by replacing cross beams and other appliances included in these cars." He pointed out that the expense of replacing special equipment in these cars has been "exorbitant."

Mr. May, reviewing activities of his department during the past year in the Clean Car Campaign, declared "much can be accomplished in seeking cooperation of consignees, Car Efficiency Committees, and officers of

(Continued on page 42)

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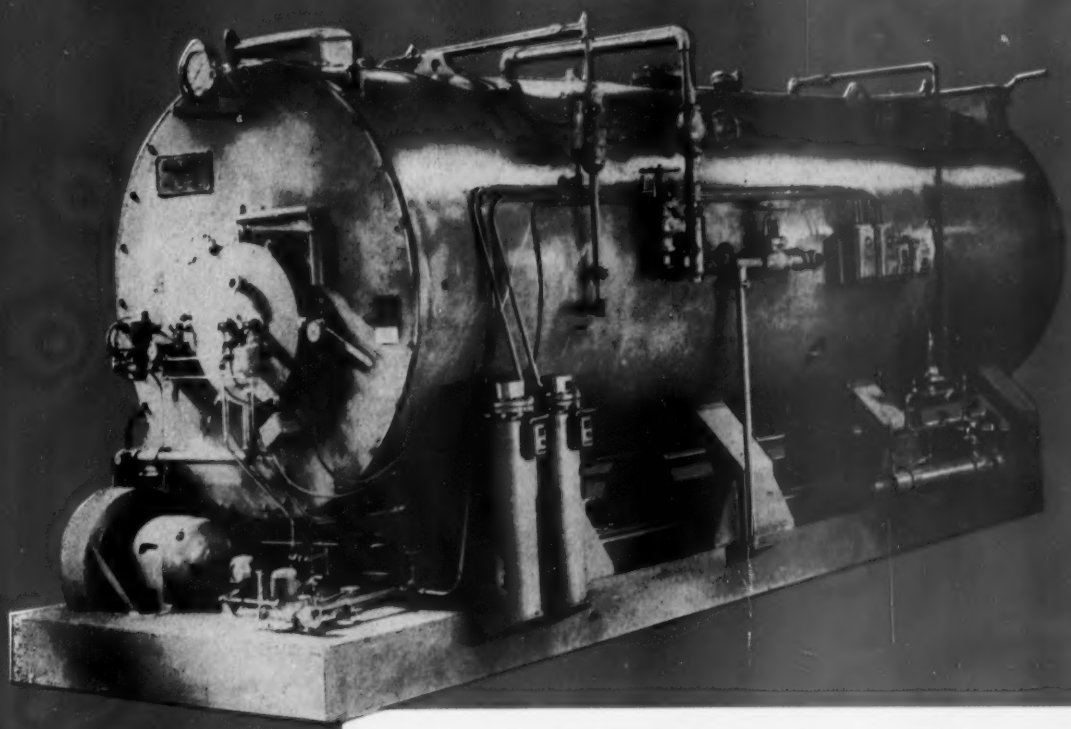

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Here is good news for railroad men—a leasing plan that will help you put into service immediately, the proven, efficient AMESTEAM Generator and at the same time, simplify your budget by letting the savings pay the lease costs. This means that you can participate in the same important economies that "The Railroad Boiler" is providing for many roads, both here and abroad.

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UNITED STATES STEEL

USS HIGH STRENGTH STEELS

TWENTY YEARS OF PERFORMANCE

17,000 refrigerator cars have been built

USS HIGH STRENGTH STEEL

better with USS COR-TEN steel since 1933

Refrigerator car operators rely on USS COR-TEN Steel in the body structure

...to fight corrosion and to reduce time out for repairs in high mileage service

PERHAPS the best way to explain why USS COR-TEN Steel construction is so widely used in refrigerator cars today, is to cite the case of General American Transportation Corporation which has built a total of 2,700 such cars with COR-TEN Steel and has used it in *all* new refrigerators built for its line since 1948.

This is of particular significance when you consider one important fact. General American provides under contract many refrigerator cars to carry meat packers products. It not only builds these cars but repairs them. What is more, *it stands all the expense for repairs.*

Under these circumstances the natural, common sense thing to do is to build with steel that will keep repairs low. General American has found such a steel in USS COR-TEN. And so have other large builders of refrigerator cars. As a result, more and more refrigerator cars are being built with strong, tough, corrosion-resisting COR-TEN Steel.

It is not hard to understand why these cars stand up better and require the minimum of maintenance.

Construction with USS COR-TEN Steel which has 50% higher yield point than structural carbon steel and a 60% higher endurance limit, assures greater durability in high mileage service. And of special importance in refrigerator car operation, where corrosion really puts the bite on equipment, is the fact that COR-TEN Steel offers 4 to 6 times the resistance to atmospheric corrosion of carbon steel . . . in its resistance to brine spray deterioration, COR-TEN Steel is considerably more effective than copper steel . . . and even in marine atmospheres COR-TEN Steel has more than twice the corrosion resistance of copper steel.

If you want to reduce maintenance costs in your freight equipment get the facts about USS COR-TEN Steel. We'll be glad to give you the very good reasons why it is now used in more than 180,000 freight cars.

UNITED STATES STEEL CORPORATION, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
NATIONAL TUBE DIVISION, PITTSBURGH • TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

NEW BOOK GIVES THE COMPLETE STORY OF USS COR-TEN STEEL

Every railroad man concerned with the more efficient operation and maintenance of freight equipment should have a copy of this recently published book. It's FREE —send for it. It fully describes this premier high-strength, corrosion-resistant steel and shows why in the 20 years of its wide application in the railroad field "Built with USS COR-TEN" has come to mean, "the best in freight car construction."

UNITED STATES STEEL

WHAT SHIPPERS WANT

(Continued from page 38)

the regional boards and continuing the campaign now in progress." He recommended that more stress be given to "key points" in each board territory as a focal point of future studies in hopes that "we can achieve even better results than in the past."

C. L. Denk, Jr., newly elected president of the NASAB, and chairman of the association's LCL Committee, recommended that the following seven point program be adopted for consideration by the railroads:

1. Establish and maintain adequate and efficient lcl service, including over-the-road performance, terminal handling and free pick-up and delivery service.
2. Operate major terminals seven days per week.
3. Substitute motor truck for handling less-carload freight at transfer points when improvement in delivery or service can be effected.
4. Perform prompt pick-up service and delivery of shipments within 24 hours after car arrival at destination.
5. Establish service and practices which will attract lcl traffic.
6. Widely publicize improved lcl service through active solicitation.
7. That all lcl traffic is given the same service as that given freight forwarders.

Mr. Denk also recommended national publication, through one agency, of a directory of all lcl package cars operated and their schedules.

Reporting on the first completed study of the AAR's LCL Research Committee, G. Homer Hill, director, informed the shippers that this committee's first investigation was concentrated on Class I railroads' stations or transfers handling over 100 cars of lcl traffic a month.

This survey revealed that car performance ranged from good to fair. The average performance showed that four out of five cars were handled on schedule. However, when calculated on a seven-day basis of car availability the overall efficiency shrunk to 60 per cent.

Roger C. Avery, traffic department, Niessner Brothers, Rochester, N.Y., chairman of the association's National Management Committee, said the 1953 campaign to reduce loss and damage reached more shippers and carrier employees than ever before.

This committee predicted that the newly adopted consignee's carload damage report now nationally accepted will prove a big help in locating and ascertaining cause of damage.

William T. Faricy, president of the AAR, speaking at the annual luncheon of the association, appealed for "careful examination of plans for financing highways to make sure that they do not produce such distortions of traffic distribution among various carriers as would impair the strength and vitality of the nation's transportation backbone—the railroads." He further urged that proposals for greatly increased expenditures for highway construction should not be looked upon as simply highway problems and nothing else.

Rather, he declared, "they should be examined from the point of view of how added construction is to be financed—where is the money coming from. They should be examined from the point of view of how the roads are to be used and how they are going to be protected from abuse. And they should be examined from the point of view of the effect upon other forms of transportation."

RESOLUTIONS ADOPTED BY NASAB

- Requested all railroads to review requirements for 50-ft and 40-ft double-door cars on their respective lines and to acquire necessary double-door equipment to protect such traffic.
- Urged the AAR to appoint a cooperative committee to work with a committee appointed by the president of the NASAB to the end that the clean car program may be more effective.
- Asked that the 13 regional boards and the National Small Shipments Traffic Conference cooperate with each other insofar as possible in the promotion of a program that will have for its primary purpose the orderly return of lcl traffic to the rails.

Mr. Faricy said that instead of depending upon property taxes or general tax revenues for financing highways, vehicles should pay charges related to the burdens they put upon the highways and the amount of use they make of them.

"Any other distribution of user charges puts an unjust burden on light vehicles making relatively little use of the highways, and bestows an undeserved premium upon heavy vehicles making extensive use of the facilities provided," he declared.

"Without adequate user charges, based upon economic costs and properly apportioned among users," he continued, "there will not be an economic distribution of traffic among the various agencies of transport. Some will gain traffic which they can handle only at a higher total cost; others will lose traffic which they could handle at the lowest real overall cost."

Any such loss of traffic would effect a reduction in the normal use of railroads, he said, "which in emergency, when the nation will need to conserve its scarce manpower and fuel, must be relied upon to pick up most of the added load."

He emphasized, "I do not for one moment seek to minimize the value of good roads in the defense of our nation, but the railroads have the basic job to do."

Railroad flexibility in making up trains—putting more tons in more cars and more cars in trains—makes it possible for railroads to expand their capacity more readily, and with greater economy in terms of manpower, fuel and materials, than can be done by any other form of transport, which depends on single-unit vehicles."

The next annual meeting of the association will be held in Pittsburgh, Oct. 11, 12 and 13, 1955.

OFFICERS ELECTED BY NASAB MEETING

President: C. L. Denk, Jr., general traffic manager, Fulton Bag & Cotton Mills, Atlanta.

Vice-President: J. W. Witherspoon, assistant general traffic manager, U. S. Rubber Company, Los Angeles.

Vice-President: T. C. Burwell, vice-president—traffic, A. E. Staley Company, Decatur, Ill.

Secretary: Harold E. Bingham, director of traffic, Spencer Chemical Company, Kansas City, Mo.

Retiring President: John N. Lind, general traffic manager, National Supply Company, Pittsburgh.

(*Continued from page 13*)
1969. Part of the proceeds from the recently concluded $6,950,000 sale to the New York State Thruway Authority of certain LV property in Buffalo, N.Y. (*Railway Age*, May 24, page 13), will be used for the redemption.

As a result of the redemption, C. A. Major, LV president, said, the sinking fund dividend-matching requirement of the road's 1949 readjustment plan will be eliminated, beginning with 1955. Mr. Major added that the LV's bond debt reduction had reached such proportions that the road's credit with its sinking fund agent at the yearend would approximate $28,000,000, with the result that for some years to come the sinking fund provisions would not involve an obligatory cash payment. After the November 24 redemption, the LV's bond debt will total $67,650,000, a reduction since January 1, 1948, of $67,737,000.

Dividends Declared

CHESAPEAKE & OHIO.—common, 75¢, quarterly, payable December 20 to holders of record December 1; 3½% convertible preferred, 87½¢, payable February 1, 1955, to holders of record January 7.

GEORGIA RR & BANKING.—$1.75, quarterly, paid October 15 to holders of record October 1.

GREAT NORTHERN.—common, 55¢, payable December 18 to holders of record November 24.

NORTHERN (New Hampshire).—$1.50, quarterly, payable October 30 to holders of record October 14.

ONTARIO & QUEBEC.—$3, semiannual, payable December 1 to holders of record November 1.

WESTERN PACIFIC.—5% preferred, $6.67, as final redemption dividend, payable November 1, upon redemption of all preferred shares not exchanged for debenture bonds and common stock (*Railway Age*, March 15, page 74; August 23, page 14; September 6, page 57; September 13, page 13.)

Security Price Averages

	Oct. 19	Prev. Week	Last Year
Average price of 20 representative railway stocks	71.40	70.10	58.41
Average price of 20 representative railway bonds	96.08	95.92	90.35

Equipment & Supplies

MoPac Inquiring for 66 Diesel Units

With permission received from Federal bankruptcy court October 15 the Missouri Pacific Lines are inquiring for 66 additional diesel units—all to be of the general-purpose type, and to cost about $11 million. It is expected 1955 delivery will complete MP system dieselization.

The new units will be assigned to local freight, work train, transfer and yard switching services, and will provide the system with sufficient diesel power to protect special movements and allow for shopping of existing power as required.

The MP plans to retain 43 of its present steam locomotives in operating condition "in the event of a change in the national defense situation" which might require their use. Of these, 23 will be for freight or passenger service and 20 exclusively for freight service. All but seven are oil fired.

The **Milwaukee** has ordered 74 diesel units, including 53 1,200-hp switchers and 9 1,600-hp and 12 1,750-hp road-switchers. Authorization by the road's directors to purchase this equipment, which will replace all its remaining steam power, was reported in the *Railway Age* of September 27, page 13.

Supply Trade

George H. Snyder, vice-president of the Transportation Equipment division of **American Steel Foundries** at Chicago, retired October 1, after more than 34 years of sales service—the last 11 of them as vice-president. Mr. Snyder, who will continue to be available to the company in a consulting capacity, was assistant to general mechanical superintendent of the Soo Line before joining ASF in 1920.

Bernard Peyton, president of the **New York Air Brake Company** since 1949, has been elected chairman of the board, effective November 1. He will be succeeded by **Charles T. Zaoral,** who joined the company two years ago as vice-president—operations.

Edgar F. Whitmore, Jr., has been elected vice-president of the **Shippers' Car Line Corporation.** Mr. Whitmore, formerly assistant vice-president, will be in charge of the firm's Chicago territory, succeeding the late **A. W. Johnson.**

The **Barnaby Manufacturing Company** has appointed the **Grandy Railway Equipment Company** its representative for the Cleveland area. **Louis S. Kutscher** has been appointed sales manager for Barnaby's metal working tool, record dies and accessories, railroad gages, hardware and special equipment divisions.

Sales representation in the Brownsville, Tex., area for mobile radio equipment manufactured by the Communication Products division of **Allen B. Du Mont Laboratories** will be handled by **Central Radio Laboratories,** Brownsville.

E. B. Low, formerly with the American Chain & Cable Co., has been appointed manager of the materials handling division of the **Marquette Railway Supply Company** at Chicago.

NYC HAS ORDERED LIGHTWEIGHT PASSENGER TRAIN; ANOTHER TO COME; PLANS TO EXTEND CTC

The fact that the New York Central has ordered a "lightweight passenger train" from one manufacturer—and expects to order another similar train from a second manufacturer in the near future—was revealed by NYC President Alfred E. Perlman in a luncheon address to the New York Society of Security Analysts on October 21.

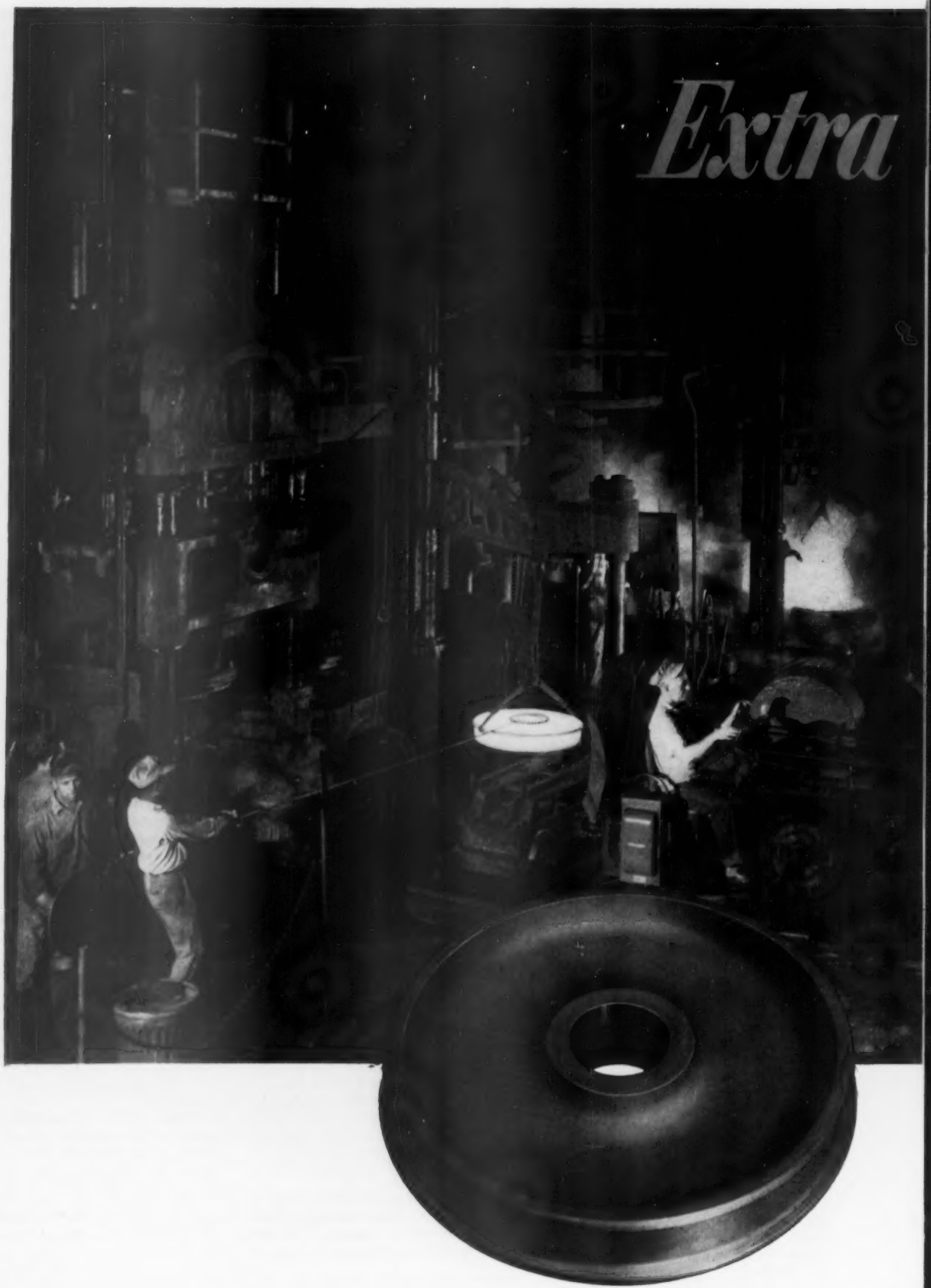
Beyond stating that the train is already on order, would be "one-quarter the weight of a standard train," and is expected to put passenger operations in the black," Mr. Perlman gave no details concerning the new equipment. Announcement of builders' names, he said, would have to come from a joint six-railroad committee now studying such equipment.

***Will Extend CTC*—Wherever possible, Mr. Perlman told the security analysts, all four-track main-line on the NYC will be cut back to double-track line, with centralized traffic control installed to retain approximate capacity of present four-track line. "There will," he added, "be no more six-track line."**

Other measures which the NYC executive said are being studied, or have been approved, as economy or efficiency measures, are abandonment of commuter service into Chicago; pooling of passenger equipment; consolidation of some short mail runs; concentration of car maintenance work at Beech Grove, Ind.; consolidation of yard facilities at Cleveland; reduction of the road's 177 diesel servicing facilities; scrapping of many old freight cars and of $3 million in steam locomotive repair parts; and reduction of mechanical department supervisory forces. Two principal diesel service shops, he reported, already have been shut down; and the West Albany (N.Y.) car shop will be closed, with an anticipated force reduction of 110 stores employees and 77 power plant workers. Mechanical department supervisory changes, he added, will save about $750,000 by the end of the year; and equal or greater savings are believed to be possible in the maintenance-of-way department.

***"Belly Fat"*—In outlining these actual or prospective economies, Mr. Perlman emphasized, however, that he is "not trying to take any fat off the property but belly fat."**

The Central, he said, "is progressing satisfactorily" in development of air rights over Grand Central Terminal.


Extra

mileage made here

THIS is a picture of men making USS *Wrought* Steel Wheels. Only a few of the forging operations are shown here, but all are indispensable to producing *Wrought* Steel Wheels of superior strength, excellent soundness, and long wearability.

In the extreme background of the picture, a hot wheel blank is being served up to a press for its second forging.

At the left of the picture, a wheel that has just come off the second forging is being swung from a cart into the mammoth punch press that will knock out the center of the wheel hub.

After the punch operation, the charging machine in the foreground will scoop up the wheel, whirl around and thrust it into one of the furnaces at the extreme right. In the photograph, the charging machine is just removing a glowing wheel from the furnace. Heated to the required temperature, it is ready for the rolling mill where it will be rolled to size, measured, and passed on to the coning press—and so on, and so on.

But what does this one-at-a-time wheel making do for you? What advantages will *you* realize from USS *Wrought* Steel Wheels? Well . . .

THEY LAST LONGER . . . USS One-Wear *Wrought* Steel Wheels will average 200,000 to 300,000 miles or more in normal freight car service.

THEY COST LESS . . . Their far greater life in any given service will reflect a *substantially lower annual cost* than that of the ordinary wheel, even though, initially, the One-Wear *Wrought* Steel Wheel costs a little more than the ordinary type wheel.

REQUIRE LESS MAINTENANCE . . . Rolling on One-Wear *Wrought* Steel Wheels, a car spends more time *in service* and less time on repair sidings, resulting in increased revenue to the railroad. Also, less frequent repair means reduced maintenance and lower labor costs.

SAVE UNSPRUNG WEIGHT . . . Because they are lighter than ordinary wheels, eight *Wrought* Steel Wheels under a 50-ton capacity car will save approximately 1,520 lbs. of unsprung weight, which can be directly converted into payload capacity—or result in savings due to the decreased load. Furthermore, reduced unsprung weight means less pounding on the track system.

Two strategically located complete wheel shops are ready to fill your orders for *Wrought* Steel Wheels: McKees Rocks (Pittsburgh), Pennsylvania shop, serving the East and Southeast, and the Gary, Indiana shop, supplying the Western and Southern Lines.

USS WROUGHT STEEL WHEELS

UNITED STATES STEEL CORPORATION, PITTSBURGH, PA.
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.

USS

COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

UNITED STATES STEEL

Railway Officers

J. R. Pritchard Succeeds C. M. Self as NS President

J. Raymond Pritchard, vice-president and secretary of the Norfolk Southern at Norfolk, Va., has been elected president of that road, succeeding Cecil M. Self, retired.

L. P. Kennedy, resident vice-president at Raleigh, N.C., has been elected executive vice-president and assigned to the operations duties being relinquished by J. C. Wroton, vice-president—operations, who has retired after 53 years of railroad service, the last seven of which were with the NS. Miss Goldie M. Lane, assistant secretary, has been elected secretary.

BURLINGTON.—R. G. Bucklin, general agent at Dallas, Tex., has been appointed assistant general agent, freight department, at San Francisco, succeeding **J. A. Miklas,** who has retired. Mr. Bucklin's successor is **H. P. Parker,** who transfers from Houston, and in turn has been replaced by **W. L. Malone,** commercial agent at Dallas.

CANADIAN NATIONAL.—Dixon Bennett, office assistant in president's office, has been appointed assistant purchasing agent.

CANADIAN PACIFIC. — E. J. Evason, chief traveling auditor of disbursements, has been appointed assistant auditor of payrolls at Calgary, Alta., succeeding **John Denholm,** who retired September 30, after 42 years of service.

CENTRAL OF GEORGIA.—J. A. Dowling and **C. P. Collier, Jr.,** commercial agents at New York and Denver, respectively, have been appointed general agents, with the same headquarters, newly created positions. **J. D. Addison** and **G. T. Beeland** have been named district freight agents at Rome, Ga., and Athens, Ga., respectively, and **H. H. Morgan** has been appointed general agent at Nashville, Tenn. The positions of commercial agents at Rome, Athens and Nashville, formerly held by Messrs. Addison, Beeland and Morgan, respectively, have been abolished.

CHARLESTON & WESTERN CAROLINA.—James F. Small, commercial agent, has been named general agent, with headquarters as before at Charleston, S. C.

CHESAPEAKE & OHIO.—Joseph F. Doherty, press relations manager at Cleveland, retired October 1 under the road's retirement rule.

The title of **C. M. Schaefer,** general safety and fire prevention agent—system, has been changed to superintendent of safety and fire prevention, Richmond, Va. **E. H. Byer,** superintendent of fire prevention and **A. E. Duncan,** superintendent of safety, have been appointed assistant superintendents of safety and fire prevention of the Southern region at Richmond and the Northern region at Grand Rapids, Mich., respectively.

Henry V. Layne, assistant coal traffic agent at Richmond, Va., retires October 31 after 44 years with the C&O.

CHICAGO & NORTH WESTERN.—H. H. Magill, superintendent motive power at Chicago, has been advanced to assistant chief mechanical officer at that point, succeeding **George R. Anderson,** who retired October 1 after more than 43 years

BELT RAILWAY OF CHICAGO.—E. C. Harvey, assistant superintendent at Chicago, has been promoted to superintendent there (*Railway Age*, September 27, page 52).

CHICAGO & EASTERN ILLINOIS.—Harvard R. Osmond, general attorney and commerce counsel at Chicago, who has been appointed general solicitor there, succeeding Thomas N. Cook, retired.

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of service with the company. Named to succeed Mr. Magill is **W. P. Miller,** assistant superintendent motive power, system lines, there. **W. W. Matzke,** chief mechanical engineer, system lines, replaces Mr. Miller, while **E. H. Weston,** assistant chief mechanical engineer at Chicago, is Mr. Matzke's successor. Mr. Weston is replaced by **W. K. Farmer,** mechanical engineer there.

ERIE.—Thomas J. Tobin, vice-president, finance and accounting, at Cleveland, retires October 31, after 46 years of railroad service.

LEHIGH & HUDSON RIVER.—Samuel Meyers, purchasing agent and general storekeeper at Warwick, N. Y., retired September 30, after more than 48 years of service. **Harold W. Quinlan,** general auditor, has been appointed general auditor and purchasing agent.

MILWAUKEE.—William J. Whalen, assistant vice-president — operations, has been elected vice-president —operations at Chicago, succeeding **Lloyd F. Donald,** who retires November 1. Mr. Whalen, who joined the Milwaukee in 1906 as water boy, progressed through a number of operating positions before being appointed general superintendent at Milwaukee

William J. Whalen

in 1946. He was appointed assistant general manager in 1948, and general manager in 1950, and since October 1952 has been assistant vice-president —operations.

NORTHERN PACIFIC.—Lowry Smith, assistant vice-president—operating deparment, at St. Paul, retired October 1, and that position has been abolished. **C. L. Harding,** assistant superintendent of the Lake Superior division at Duluth, has been named assistant to vice-president at St. Paul. Mr. Harding's successor is **S. A. Anderson,** trainmaster at Helena, Mont., who also replaces Mr. Harding as superintendent of the Duluth Union Depot & Transfer Co., an NP subsidiary. **L. H. Dahl,** trainmaster, Yellowstone division at Billings, Mont., transfers to Helena to succeed Mr. Anderson, while **A. B. Riley,** bridge and building supervisor at Minneapolis, replaces Mr. Dahl. Mr. Riley's successor is **C. M. Rea,** assistant bridge and building supervisor at Fargo, N.D.

E. M. Stevenson, general agent, freight department at Seattle, has been named assistant general freight and passenger agent at Tacoma, Wash., to succeed **J L. Norton,** who retired October 1. Mr. Stevenson's successor is **M. J. Delmore,** who transfers from Billings. **T. O. Kirkvold,** traveling freight and passenger agent at Spokane, Wash., replaces Mr. Delmore. Appointed as general agent of the newly created general agency at Aberdeen, Wash., is **C. J. Ryan,** district freight and passenger agent there.

Kermit W. Johnson, assistant general claim agent at St. Paul, has been advanced to general claim agent to succeed the late **Robert E. Keck** (*Railway Age*, October 11).

ROCK ISLAND.—E. E. Foulks, general superintendent of transportation at Chicago, has been appointed assistant vice-president there. Mr. Foulks' successor is **R. H. Anderson,** Southern division superintendent at El Reno, Okla. **J. C. Cartland,** assistant di-

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SPECIALISTS IN CABOOSES

Ernest E. Foulks

vision superintendent at Little Rock, Ark., has been named Western division superintendent at Fairbury, Neb., succeeding **H. G. Dennis,** who in turn succeeds Mr. Anderson at El Reno.

Mr. Foulks entered railway service in 1920 as a clerk for the Santa Fe. After holding several operating positions with that road, he was named superintendent of transportation in 1945. He joined the Rock Island as superintendent of transportation in 1952.

Walter E. Heimerdinger, assistant chief engineer at Chicago, retired September 30 after 44 years of railroad service.

SANTA FE.—J. H. Blake, acting superintendent of the subsidiary Panhandle & Santa Fe at Slaton, Tex., has been appointed superintendent of the Eastern division at Emporia, Kan., succeeding the late **J. F. Fenimore.**

SEABOARD.—R. L. Lynn, master mechanic of the Alabama division at Americus, Ga., has been transferred to the Carolina division at Savannah. **R. L. Harper,** master mechanic at Savannah, succeeds Mr. Lynn.

OBITUARY

William M. Wardrop, 75, who retired in 1938 as assistant to general manager, Central region, **Pennsylvania,** at Pittsburgh, died October 13 in Belle Meade, N.J., Sanitarium.

M. C. Browder, 54, treasurer of the **Louisville & Nashville** at Louisville, Ky., was fatally injured in an automobile collision October 16.

J. Hugh Campbell, 57, manager—department of public relations of the **Canadian Pacific,** at Montreal, died in a hospital there October 16.

Bertram N. Lewis, retired general mechanical superintendent of the **Soo Line** at Minneapolis, died October 10 at Santa Monica, Cal.

J. P. Wadsworth, 63, superintendent of safety for the **Canadian National** system at Montreal, died October 15.

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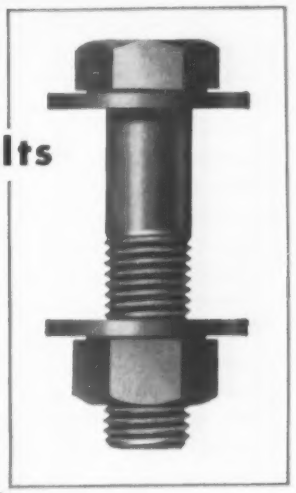

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Freight Operating Statistics of Large Railways — Selected Items

Region, Road and Year		Miles of road operated	Train-miles	Locomotive-Miles: Principal and helper	Locomotive-Miles: Light	Car-Miles: Loaded (thousands)	Car-Miles: Per cent loaded	Ton-miles (thousands): Gross excl.locos & tenders	Ton-miles (thousands): Net rev. and non-rev.	Road-locos. on line: Serviceable: Unstored	Road-locos. on line: Serviceable: Stored	Road-locos. on line: B.O.	Road-locos. on line: per cent B.O.
New Eng. Region	Boston & Maine	1954	1,664	241,046	243,224	6,068	8,030	64.9	523,151	205,663	68	1	7	9.2
		1953	1,668	253,639	257,901	9,020	8,954	67.6	568,410	231,425	77	5	7	7.9
	N. Y., N. H. & Hfd	1954	1,746	258,408	258,416	17,394	10,395	65.5	651,473	258,968	89	..	4	4.3
		1953	1,748	298,066	298,148	19,187	11,292	67.1	703,135	289,845	91	..	2	2.2
Great Lakes Region	Delaware & Hudson	1954	793	180,197	182,325	6,415	7,744	64.9	542,992	266,939	38	..	4	9.5
		1953	793	201,082	206,109	10,231	9,147	68.5	637,270	328,164	46	..	..	..
	Del., Lack. & Western	1954	962	259,888	269,509	21,191	10,611	63.9	709,447	292,109	61	..	2	3.2
		1953	962	270,875	284,713	24,782	12,073	67.8	793,616	350,882	66	..	..	..
	Erie	1954	2,225	546,509	549,182	20,228	29,213	65.6	1,849,331	680,608	162	..	1	.6
		1953	2,237	609,491	613,730	28,609	32,984	66.6	2,114,323	839,911	166	..	3	1.8
	Grand Trunk Western	1954	952	237,367	244,107	2,019	7,713	59.0	552,497	215,539	58	..	19	24.7
		1953	952	278,322	284,020	1,753	8,577	60.6	607,717	249,343	62	3	13	16.7
	Lehigh Valley	1954	1,150	206,829	209,799	5,356	9,781	63.4	684,613	308,068	32	1	..	..
		1953	1,151	229,497	233,070	7,787	10,975	66.8	754,072	352,896	32	..	1	3.0
	New York Central	1954	10,663	2,233,288	2,271,905	83,237	84,677	58.5	6,099,233	2,563,340	586	133	172	19.3
		1953	10,667	2,650,174	2,715,110	105,521	99,231	59.8	7,203,258	3,163,649	729	56	156	16.6
	New York, Chic. & St. L.	1954	2,161	667,300	691,208	5,921	27,399	64.0	1,935,550	831,896	142	43	37	16.7
		1953	2,161	788,900	819,620	7,590	29,928	65.1	2,123,270	946,937	214	10	29	11.5
	Pitts. & Lake Erie	1954	221	49,822	49,935		2,062	61.4	181,608	107,726	12	7	1	5.0
		1953	221	74,399	75,419	120	3,210	65.7	276,221	168,732	24	6	6	16.7
	Wabash	1954	2,381	514,323	515,126	6,783	22,986	65.7	1,483,005	563,784	103	..	..	..
		1953	2,381	573,434	579,125	8,744	24,833	66.5	1,662,528	650,652	104	17	26	17.7
Central Eastern Region	Baltimore & Ohio	1954	6,077	1,404,116	1,541,919	126,033	54,909	60.0	4,263,290	1,993,059	431	81	104	16.9
		1953	6,081	1,670,790	1,847,284	184,158	66,786	62.4	5,146,128	2,527,649	500	28	104	16.5
	#Bessemer & Lake Erie	1954	209	52,481	56,706	199	2,916	63.3	342,271	225,845	15	..	..	..
		1953	213	63,820	70,112	274	3,530	57.9	433,536	279,681	18	27	..	..
	#Central RR Co. of New Jersey	1954	613	119,672	120,382	5,744	4,382	63.8	329,157	166,539	59	2	9	12.9
		1953	617	129,232	134,893	10,178	4,945	66.3	369,330	192,848	72	9	6	6.9
	Chicago & Eastern Ill.	1954	868	119,456	119,456	2,903	4,688	65.2	308,414	165,380	24	..	3	11.1
		1953	868	123,959	123,959	2,526	5,152	66.9	349,662	169,600	28	..	1	3.4
	Elgin, Joliet & Eastern	1954	236	72,917	73,419	....	2,255	64.4	175,481	93,519	35	6	2	4.7
		1953	236	99,128	99,840	....	3,091	64.8	246,853	134,469	39	..	2	4.9
	Pennsylvania System	1954	9,906	2,651,792	2,830,813	192,184	110,848	62.4	8,050,082	3,683,574	721	349	362	25.3
		1953	9,939	3,244,258	3,469,692	303,356	130,907	63.5	9,664,811	4,646,080	1,050	134	317	21.1
	Reading	1954	1,304	278,590	279,449	9,538	9,998	60.0	795,267	393,333	162	26	20	9.6
		1953	1,309	327,093	333,299	16,365	12,425	62.5	987,271	506,883	179	24	14	6.5
	Western Maryland	1954	857	131,448	138,113	7,392	4,755	61.9	392,417	213,454	38	40	..	..
		1953	873	168,326	184,466	14,107	5,972	64.2	492,648	277,568	83	32	4	3.4
Pocahontas Region	Chesapeake & Ohio	1954	5,050	1,167,064	1,180,914	27,916	45,836	58.0	3,849,264	2,081,352	315	86	160	28.5
		1953	5,034	1,268,545	1,294,152	34,441	55,013	57.4	4,695,415	2,554,666	424	42	151	24.5
	Norfolk & Western	1954	2,114	571,884	597,344	38,084	25,226	58.0	2,277,801	1,210,031	201	59	22	7.8
		1953	2,113	641,690	673,004	45,715	29,651	58.5	2,622,638	1,402,621	211	33	20	7.6
Southern Region	Atlantic Coast Line	1954	5,341	725,020	725,020	10,131	20,767	59.8	1,504,934	684,768	240	..	7	2.8
		1953	5,367	743,064	743,092	9,356	22,008	60.1	1,573,378	708,512	243	..	5	2.0
	Central of Georgia	1954	1,731	175,917	175,944	2,062	6,592	66.8	450,480	210,283	72	..	1	1.4
		1953	1,754	198,116	198,168	2,467	6,969	66.8	477,218	221,293	67	..	2	2.9
	Gulf, Mobile & Ohio	1954	2,718	274,714	274,714	311	13,878	68.5	941,599	445,799	86	..	3	3.4
		1953	2,718	313,083	313,083	329	16,016	69.4	1,090,119	533,525	86	..	3	3.4
	Illinois Central	1954	6,537	1,225,332	1,227,287	39,198	45,783	61.1	3,337,462	1,496,486	464	112	89	13.4
		1953	6,538	1,420,785	1,423,099	48,016	50,578	62.9	3,675,540	1,700,734	536	68	62	9.3
	Louisville & Nashville	1954	4,720	818,448	833,362	15,827	28,242	62.5	2,093,806	1,048,022	229	74	6	1.9
		1953	4,728	951,750	999,294	19,063	33,102	63.1	2,446,613	1,232,695	246	76	30	8.5
	Nash., Chatt. & St. Louis	1954	1,032	161,584	164,891	3,358	4,925	66.1	340,897	159,463	51	..	2	3.8
		1953	1,032	178,403	182,567	3,484	5,941	69.5	392,470	184,394	48	..	4	7.7
	Seaboard Air Line	1954	4,053	536,093	536,093	869	19,909	62.3	1,431,798	647,938	141	..	11	7.2
		1953	4,068	553,682	553,682	736	20,955	63.4	1,482,699	670,148	141	12	6	3.8
	Southern	1954	6,262	899,299	899,374	12,069	35,855	64.9	2,381,261	1,054,050	270	..	2	.7
		1953	6,263	973,447	973,489	11,982	37,759	69.7	2,404,483	1,101,443	228	15	9	3.6
Northwestern Region	Chicago & North Western	1954	7,850	737,641	740,215	13,678	30,343	63.1	2,182,968	925,462	179	34	47	18.1
		1953	7,849	814,011	817,756	12,646	33,152	64.1	2,404,528	1,027,712	257	36	77	20.8
	Chicago Great Western	1954	1,437	134,584	134,584	174	7,363	66.2	507,663	228,692	31	..	2	6.1
		1953	1,435	139,514	139,514	193	8,183	69.5	556,061	261,413	32	..	2	5.9
	Chic., Milw., St. P. & Pac.	1954	10,633	951,023	965,219	21,646	38,471	61.3	2,750,639	1,195,466	301	79	31	7.5
		1953	10,662	1,075,491	1,092,839	34,558	42,487	63.0	2,987,901	1,327,249	343	48	38	8.9
	Chic., St. P., Minn. & Omaha	1954	1,606	164,482	165,866	4,115	5,230	64.5	372,729	163,295	60	2	20	24.4
		1953	1,606	182,039	186,181	7,505	5,715	66.6	405,039	182,118	67	..	26	28.0
	Duluth, Missabe & Iron Range	1954	566	154,051	154,570	923	7,453	50.6	759,450	471,019	58	8	5	7.0
		1953	567	214,515	215,750	1,674	10,120	51.4	1,045,184	629,853	64	..	5	7.2
	Great Northern	1954	8,294	1,106,191	1,111,419	30,347	44,372	60.7	3,544,186	1,737,364	260	162	43	9.2
		1953	8,291	1,173,547	1,175,842	34,202	47,007	61.2	3,752,425	1,875,388	308	136	37	7.7
	Minneap., St. P. & S. Ste. M.	1954	4,169	409,868	413,948	5,046	13,987	67.6	935,386	450,173	102	1	16	13.4
		1953	4,172	414,029	419,383	5,175	13,953	66.0	944,050	449,002	107	..	9	7.8
	Northern Pacific	1954	6,570	837,238	863,645	30,338	32,593	64.1	2,365,648	1,047,958	310	27	45	11.8
		1953	6,583	906,273	934,224	37,763	35,117	64.7	2,554,981	1,158,443	314	18	64	16.2
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1954	13,076	2,430,586	2,505,928	62,846	102,583	60.7	7,250,537	2,531,172	536	115	22	3.3
		1953	13,095	2,834,273	2,944,349	103,746	116,832	62.4	8,156,762	2,970,411	629	64	46	6.2
	Chic., Burl. & Quincy	1954	8,824	1,167,784	1,166,723	29,497	46,430	62.6	3,238,970	1,417,906	258	63	31	8.8
		1953	8,833	1,234,537	1,240,063	38,599	50,257	65.0	3,477,902	1,583,799	305	38	79	18.7
	Chic., Rock I. & Pac.	1954	7,860	977,904	976,920	2,740	35,281	58.1	2,668,836	1,073,531	171	1	11	6.0
		1953	7,885	1,071,470	1,078,563	7,228	39,559	61.8	2,885,217	1,232,115	170	7	10	5.3
	Denver & R. G. Wn.	1954	2,164	289,496	307,561	24,350	12,809	68.1	885,559	390,347	61	50	26	19.0
		1953	2,313	314,156	340,270	37,183	14,377	70.7	1,008,578	465,688	92	33	25	16.7
	Southern Pacific	1954	8,067	2,361,064	2,484,655	296,533	101,012	60.2	7,258,525	2,740,726	662	20	159	18.9
		1953	8,058	2,467,915	2,603,334	291,783	100,578	59.7	7,239,910	2,708,464	726	14	110	12.9
	Union Pacific	1954	9,816	2,581,532	2,643,540	131,446	106,100	60.8	7,380,487	2,839,307	509	240	83	10.0
		1953	9,824	2,776,949	2,866,463	189,116	105,328	61.1	7,488,211	3,023,328	621	75	135	16.2
	Western Pacific	1954	1,190	228,699	231,208	8,320	9,970	69.7	631,397	277,201	39	6	..	..
		1953	1,190	251,172	259,814	20,005	11,185	67.8	755,353	345,066	41	6	11	19.3
Southwestern Region	International-Gt. Northern*	1954	1,103	125,976	125,976	....	4,953	63.5	373,769	175,786	44	..	2	4.3
		1953	1,104	169,480	169,480	....	6,106	64.9	439,207	200,161	50	1	2	3.8
	Kansas City Southern	1954	886	131,989	132,017	150	7,508	66.2	529,838	236,935	23	..	3	11.5
		1953	886	166,421	166,436	148	8,670	63.8	634,245	293 766	24	1	1	3.8
	Mo.-Kans.-Texas Lines	1954	3 229	355,217	355,217	3,556	13,520	64.6	895,433	383,513	88	..	..	..
		1953	3,230	385,927	385,927	4,435	14,567	64.8	960,585	410,941	88	7	..	..
	Missouri Pacific*	1954	6,896	1,009,031	1,010,373	11,220	40,653	64.7	2,852,801	1,271,324	226	69	84	22.2
		1953	6,917	1,249,557	1,253,968	15,306	47,553	65.6	3,279,724	1,448,863	300	28	68	17.2
	Texas & Pacific	1954	1,822	315,759	315,759	2,915	13,597	61.1	973,270	361,818	58	..	2	3.3
		1953	1,831	357,417	357,417	3,691	15,278	61.3	1,091,845	397,191	59	..	..	..
	St. Louis-San Francisco	1954	4,564	586,067	586,067	5,576	21,449	64.6	1,456,627	639,942	124	..	8	6.1
		1953	4,564	616,257	616,490	6,012	22,746	64.4	1,573,323	704,349	189	..	3	1.6
	St. Louis Southw. Lines	1954	1,555	284,373	284,377	1,380	12,692	73.1	768,438	343,503	54	7	9	12.9
		1953	1,561	318,763	318,795	4,282	14,697	71.9	910,743	407,115	61	16	9	10.5
	Texas & New Orleans	1954	4,275	689,625	689,625	5,755	25,353	61.7	1,802,752	771,600	158	..	31	16.4
		1953	4,279	779,889	779,889	10,001	27,129	61.5	1,924,566	818,107	192	..	30	13.5

#In this table for June (*Railway Age*, September 20, page 34) a printer's error caused figures for the Bessemer & Lake Erie to appear in line with the name Central of New Jersey, and the figures for the Central of New Jersey to appear in line with Central of Pennsylvania.

For the Month of July 1954 Compared with July 1953

Region	Road	Year	Freight cars on line: Home	Foreign	Total	Per Cent B.O.	G.t.m. per train-hr. excl. locos and tenders	G.t.m. per train-mi. excl. locos and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Car-miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
New Eng. Region	Boston & Maine	1954	2,625	6,569	9,194	5.0	35,338	2,178	856	25.6	696	41.9	3,987	16.3	117.3
		1953	1,612	7,395	9,007	1.9	37,001	2,245	914	25.8	798	45.7	4,476	16.5	101.8
	N. Y., N. H. & Htfd	1954	2,752	11,070	13,822	3.8	40,344	2,521	1,002	24.9	574	35.2	4,875	16.0	114.4
		1953	2,216	12,869	15,085	2.7	38,067	2,359	972	25.7	606	35.2	5,349	16.1	125.1
Great Lakes Region	Delaware & Hudson	1954	6,999	4,104	11,103	5.1	58,556	3,030	1,489	34.5	794	35.5	10,859	19.4	146.3
		1953	4,805	5,602	10,407	5.0	57,902	3,186	1,641	35.9	1,065	43.3	13,349	18.3	120.7
	Del., Lack. & Western	1954	8,342	8,109	16,451	4.6	48,820	2,788	1,148	27.5	577	32.8	9,795	17.9	166.3
		1953	6,660	9,398	16,058	5.2	49,891	2,987	1,321	29.1	717	36.4	11,766	17.0	166.8
	Erie	1954	12,284	15,852	28,136	5.6	64,612	3,417	1,258	23.3	787	51.5	9,867	19.1	123.6
		1953	8,532	19,772	28,304	3.5	62,846	3,506	1,393	25.5	949	56.0	12,112	18.1	135.5
	Grand Trunk Western	1954	4,841	8,526	13,367	4.9	48,657	2,341	913	27.9	530	32.1	7,303	20.9	113.7
		1953	3,598	8,794	12,392	5.4	44,827	2,196	901	29.1	632	35.9	8,449	20.5	129.9
	Lehigh Valley	1954	9,946	6,524	16,470	6.2	66,409	3,350	1,508	31.5	603	30.2	8,641	20.1	219.3
		1953	6,308	10,045	16,353	5.3	64,555	3,336	1,561	32.2	678	31.6	9,890	19.6	245.2
	New York Central	1954	83,262	71,314	154,576	12.4	48,150	2,782	1,169	30.3	528	29.8	7,755	17.6	98.5
		1953	68,629	90,635	159,264	9.0	46,194	2,755	1,210	31.9	633	33.2	9,567	17.0	106.2
	New York, Chic. & St. L.	1954	10,151	13,595	23,746	8.1	53,840	2,948	1,267	30.4	1,130	58.2	12,418	18.6	107.2
		1953	7,678	19,097	26,775	5.6	47,986	2,740	1,222	31.6	1,174	57.0	14,135	17.8	116.7
	Pitts. & Lake Erie	1954	10,361	6,194	16,555	6.0	55,606	3,653	2,167	52.2	203	6.3	15,724	15.3	81.0
		1953	3,437	8,279	11,716	7.4	55,678	3,718	2,271	52.6	432	12.5	24,629	15.0	74.9
	Wabash	1954	9,709	9,842	19,551	8.9	67,077	2,898	1,102	24.5	914	56.7	7,638	23.3	172.7
		1953	8,355	11,114	19,469	8.9	63,507	2,848	1,142	26.2	1,060	60.8	8,815	22.4	136.5
Central Eastern Region	Baltimore & Ohio	1954	60,466	36,331	96,797	13.3	48,107	3,075	1,438	36.3	652	30.0	10,580	15.8	92.1
		1953	54,073	50,411	104,484	5.4	45,108	3,134	1,539	37.8	794	33.6	13,408	14.6	109.3
	#Bessemer & Lake Erie	1954	6,599	916	7,515	12.7	103,094	6,682	4,409	77.5	939	19.2	34,858	15.8	137.5
		1953	5,068	1,382	6,450	11.2	107,764	6,933	4,473	79.2	1,406	30.6	42,357	15.9	56.8
	#Central RR Co. of New Jersey	1954	6,208	8,284	14,492	12.0	39,092	2,865	1,450	38.0	353	14.6	8,764	14.2	79.3
		1953	3,628	9,804	13,432	9.8	38,661	3,012	1,573	39.0	446	17.3	10,083	13.5	75.8
	Chicago & Eastern Ill.	1954	3,274	2,800	6,074	14.1	44,370	2,594	1,391	35.3	812	35.3	6,146	17.2	151.7
		1953	2,677	4,174	6,851	6.7	44,737	2,862	1,388	32.9	822	37.3	6,303	15.9	153.3
	Elgin, Joliet & Eastern	1954	7,992	6,255	14,247	7.9	21,834	2,498	1,331	41.5	210	7.9	12,783	9.1	75.3
		1953	6,981	11,706	18,687	5.2	20,592	2,616	1,425	43.5	226	8.0	18,380	8.3	102.6
	Pennsylvania System	1954	116,063	85,923	201,986	10.6	54,743	3,119	1,427	33.2	584	28.2	11,995	18.0	74.1
		1953	104,502	99,148	203,650	8.1	49,996	3,072	1,477	35.5	737	32.7	15,079	16.8	88.0
	Reading	1954	19,849	12,246	32,195	7.4	40,523	2,856	1,412	39.3	399	16.9	9,730	14.2	57.5
		1953	15,512	16,905	32,417	6.3	39,562	3,019	1,550	40.8	507	19.9	12,491	13.1	67.0
	Western Maryland	1954	7,229	2,241	9,470	4.0	42,986	3,004	1,634	44.9	741	26.7	8,035	14.6	65.9
		1953	6,003	3,447	9,450	5.1	41,870	2,972	1,675	46.5	1,024	34.3	10,256	14.3	57.7
Pocahontas Region	Chesapeake & Ohio	1954	54,249	22,826	77,075	4.2	62,212	3,314	1,792	45.4	846	32.1	13,295	18.9	75.0
		1953	50,903	27,030	77,933	3.0	66,374	3,716	2,022	46.4	1,052	39.5	16,370	17.9	73.6
	Norfolk & Western	1954	39,048	6,472	45,520	2.4	70,957	4,074	2,164	48.0	850	30.5	18,464	17.8	79.7
		1953	31,803	7,608	39,411	3.0	71,759	4,156	2,222	47.3	1,161	41.9	21,413	17.6	94.3
Southern Region	Atlantic Coast Line	1954	20,671	12,925	33,596	2.3	38,376	2,081	947	33.0	667	33.8	4,136	18.5	105.4
		1953	16,496	16,080	32,576	2.2	36,602	2,124	957	32.2	714	36.9	4,258	17.3	109.1
	Central of Georgia	1954	3,364	4,444	7,808	5.8	45,729	2,573	1,201	31.9	827	38.8	3,919	17.9	86.9
		1953	2,799	5,003	7,802	3.9	42,838	2,420	1,122	31.8	887	41.8	4,070	17.8	91.2
	Gulf, Mobile & Ohio	1954	6,027	8,101	14,128	3.8	68,346	3,435	1,626	32.1	997	45.3	5,291	19.9	106.8
		1953	4,785	9,751	14,536	3.7	67,399	3,494	1,710	33.3	1,211	52.4	6,332	19.4	121.9
	Illinois Central	1954	31,053	20,295	51,348	4.4	47,098	2,763	1,239	32.7	945	47.3	7,385	17.3	66.1
		1953	26,050	23,863	49,913	2.6	44,918	2,629	1,217	33.6	1,050	49.6	8,391	17.4	76.8
	Louisville & Nashville	1954	38,247	11,448	49,695	3.2	45,015	2,566	1,284	37.1	676	29.1	7,163	17.6	96.0
		1953	33,873	14,049	47,922	3.5	43,920	2,579	1,299	37.2	861	36.7	8,410	17.1	100.7
	Nash., Chatt. & St. Louis	1954	3,826	3,021	6,847	5.0	40,675	2,112	988	32.4	743	34.7	4,984	19.3	110.5
		1953	2,293	4,269	6,562	2.8	41,580	2,206	1,037	31.0	933	43.3	5,764	18.9	123.6
	Seaboard Air Line	1954	13,778	10,769	24,547	2.0	49,398	2,707	1,225	32.5	844	41.6	5,157	18.5	133.4
		1953	11,250	12,492	23,743	2.3	47,683	2,702	1,221	32.0	935	46.1	5,314	17.8	134.6
	Southern	1954	19,460	23,788	43,248	3.9	47,523	2,655	1,175	29.4	788	41.3	5,430	17.9	116.6
		1953	16,248	27,545	43,793	2.9	43,009	2,487	1,139	29.2	809	39.8	5,673	17.4	126.5
Northwestern Region	Chicago & North Western	1954	20,589	26,383	46,972	6.2	50,631	3,044	1,291	30.5	615	31.9	3,803	17.1	97.1
		1953	23,153	29,785	52,938	4.9	49,529	3,063	1,309	31.0	633	31.8	4,224	16.8	80.5
	Chicago Great Western	1954	1,769	4,197	5,966	3.2	72,617	3,774	1,700	31.1	1,222	59.5	5,134	19.3	136.9
		1953	1,297	4,785	6,082	3.0	70,809	3,996	1,879	31.9	1,320	59.5	5,876	17.8	139.0
	Chic., Milw., St. P. & Pac.	1954	38,149	29,293	67,442	7.7	52,458	2,906	1,263	31.1	577	30.3	3,627	18.1	82.6
		1953	35,678	33,110	68,788	5.8	48,806	2,794	1,241	31.2	633	32.2	4,016	17.6	90.2
	Chic., St. P., Minn. & Omaha	1954	1,079	7,471	8,550	4.1	31,491	2,297	1,006	31.2	613	30.4	3,280	13.9	74.3
		1953	1,135	7,715	8,850	4.9	31,494	2,300	1,034	31.9	678	31.9	3,658	14.2	75.3
	Duluth, Missabe & Iron Range	1954	14,204	678	14,892	2.3	84,836	5,182	3,214	63.2	1,018	31.8	26,845	17.2	80.2
		1953	14,538	917	15,455	3.2	83,782	5,134	3,094	62.2	1,311	41.0	35,834	17.2	117.6
	Great Northern	1954	25,362	25,749	51,111	2.7	54,284	3,246	1,591	39.2	1,156	48.6	6,757	16.9	85.8
		1953	25,598	24,428	50,026	3.1	51,057	3,235	1,617	39.9	1,267	51.9	7,297	16.0	87.7
	Minneap., St. P. & S. Ste. M.	1954	7,603	8,096	15,699	5.8	45,675	2,304	1,109	32.2	963	44.3	3,483	20.0	122.5
		1953	7,190	7,132	14,322	6.4	43,593	2,289	1,089	32.2	999	47.0	3,472	19.1	130.1
	Northern Pacific	1954	21,747	18,416	40,163	5.5	53,723	2,837	1,257	32.2	867	42.1	5,145	19.0	80.8
		1953	21,943	16,999	38,942	5.9	51,693	2,841	1,288	33.0	990	46.4	5,677	18.3	86.0
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1954	58,050	32,925	90,975	3.6	67,974	2,993	1,045	24.7	888	59.3	6,244	22.8	129.2
		1953	51,022	35,028	86,050	3.2	63,901	2,893	1,054	25.4	1,059	66.7	7,317	22.2	140.7
	Chic., Burl. & Quincy	1954	21,433	25,887	47,320	2.9	55,255	2,784	1,219	30.5	992	51.9	5,183	19.9	119.0
		1953	21,035	23,193	44,228	3.1	53,125	2,826	1,287	31.5	1,156	56.4	5,784	18.9	104.2
	Chic., Rock I. & Pac.	1954	13,353	17,706	31,059	6.0	52,029	2,731	1,101	30.4	1,043	59.0	4,406	19.1	183.0
		1953	11,958	22,055	34,013	4.8	50,524	2,710	1,157	31.1	1,098	57.0	5,041	18.8	192.0
	Denver & R. G. Wn.	1954	9,003	6,721	15,724	4.4	62,036	3,068	1,353	30.5	886	42.7	5,819	20.3	81.5
		1953	7,247	8,445	15,692	3.0	59,750	3,218	1,486	32.4	1,051	45.9	6,495	18.6	81.8
	Southern Pacific	1954	33,034	39,753	72,787	2.2	58,091	3,108	1,174	27.1	1,201	73.5	10,960	18.9	117.1
		1953	30,944	46,637	77,581	2.6	51,546	2,961	1,108	26.9	1,124	69.9	10,843	17.6	118.9
	Union Pacific	1954	34,217	39,193	73,410	2.5	74,350	2,884	1,110	26.8	1,330	81.7	9,331	26.0	108.9
		1953	31,957	36,056	68,013	2.2	65,620	2,731	1,103	28.7	1,495	85.2	9,927	24.3	121.8
	Western Pacific	1954	2,916	2,849	5,765	4.2	71,248	2,772	1,217	27.8	1,512	78.0	7,514	25.8	175.0
		1953	2,293	4,310	6,603	5.1	71,172	3,020	1,380	30.9	1,782	85.2	9,354	23.7	164.7
Southwestern Region	International-Gt. Northern*	1954	812	5,389	6,192	2.6	55,920	2,978	1,401	35.5	897	39.8	5,141	18.8	91.1
		1953	765	5,837	6,602	3.6	51,769	2,598	1,184	32.8	863	40.5	5,849	20.0	107.2
	Kansas City Southern	1954	1,113	6,384	7,497	3.4	80,608	4,025	1,800	31.6	1,090	52.2	8,626	20.1	177.8
		1953	916	6,136	7,052	2.9	76,213	3,824	1,771	33.9	1,357	62.7	10,696	20.0	221.5
	Mo.-Kans.-Texas Lines	1954	5,017	5,972	10,989	8.7	53,369	2,532	1,084	28.4	1,016	55.5	3,831	21.2	143.7
		1953	3,967	6,676	10,643	4.9	52,070	2,496	1,068	28.2	1,171	64.1	4,104	20.9	144.7
	Missouri Pacific*	1954	20,191	20,598	40,789	2.4	60,189	2,835	1,264	31.3	1,006	49.7	5,947	21.3	91.5
		1953	18,503	17,766	36,269	2.9	56,748	2,639	1,166	30.5	1,257	62.9	6,757	21.6	109.5
	Texas & Pacific	1954	3,381	5,604	8,985	5.6	70,481	3,092	1,149	26.6	1,208	74.4	6,406	22.9	179.8
		1953	2,172	7,308	9,480	3.7	70,638	3,960	1,113	26.0	1,316	82.5	6,998	23.1	206.0
	St. Louis-San Francisco	1954	14,391	9,131	23,522	2.8	46,628	2,489	1,094	29.8	827	42.9	4,523	18.8	158.8
		1953	11,320	11,509	22,829	3.3	45,270	2,557	1,145	31.0	922	46.2	4,978	17.7	117.4
	St. Louis Southw. Lines	1954	2,608	3,959	6,567	5.8	53,501	2,703	1,208	27.1	1,592	80.5	7,126	19.8	137.9
		1953	2,201	5,099	7,300	1.8	59,678	2,859	1,278	27.7	1,855	93.2	8,413	20.9	128.6
	Texas & New Orleans	1954	6,746	14,715	21,461	1.8	52,786	2,633	1,127	30.4	1,138	60.6	5,822	20.2	127.2
		1953	5,466	14,106	19,572	1.5	49,795	2,489	1,058	30.2	1,295	69.8	6,167	20.2	118.9

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Ryerson & Son, Inc., Joseph T. 52
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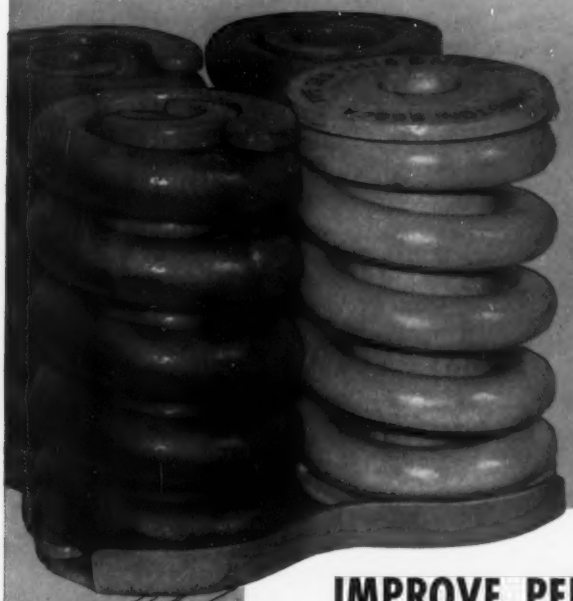

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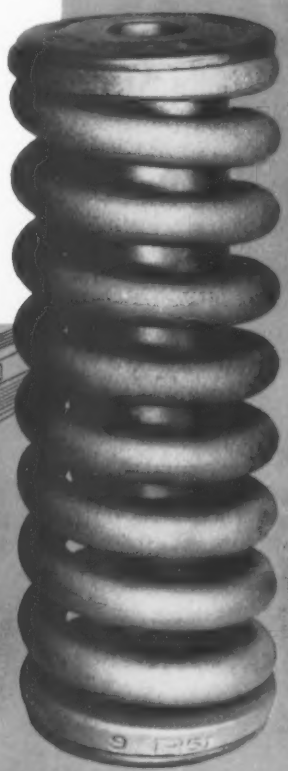

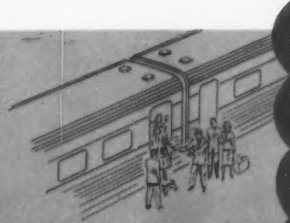

Specify Symington® LONG TRAVEL SNUBBERS for LOCOMOTIVES and PASSENGER CARS

Provide a smoother, more comfortable ride for passengers.
Locomotives operate with less roll and vertical shock.
Designs available to suit a wide variety of truck conditions.

THE SYMINGTON-GOULD CORPORATION

Works: DEPEW, NEW YORK

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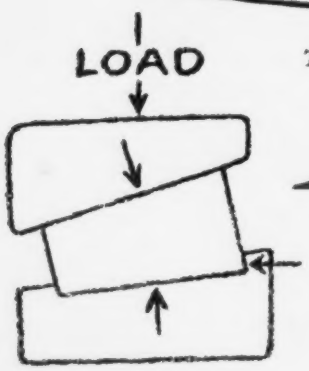
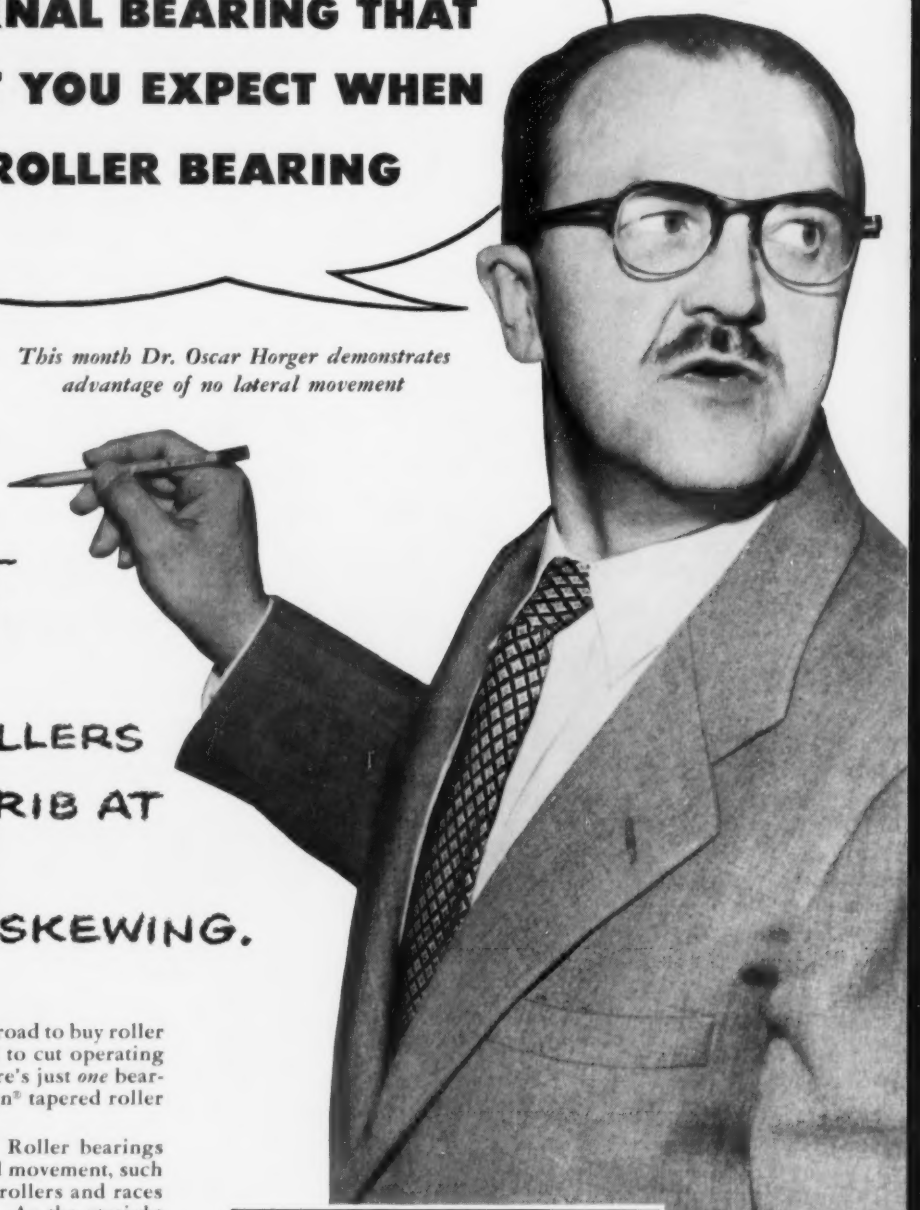
THE TAPER MAKES TIMKEN®
THE ONLY JOURNAL BEARING THAT DELIVERS WHAT YOU EXPECT WHEN YOU BUY A ROLLER BEARING



This month Dr. Oscar Horger demonstrates advantage of no lateral movement



TAPER HOLDS ROLLERS AGAINST CONE RIB AT ALL TIMES
NO SLIDING, NO SKEWING.

THERE are just two primary reasons for a railroad to buy roller bearings: to end the hot box problem and to cut operating and maintenance costs to a minimum. And there's just *one* bearing you can count on to deliver. It's the Timken® tapered roller bearing, and here's why:

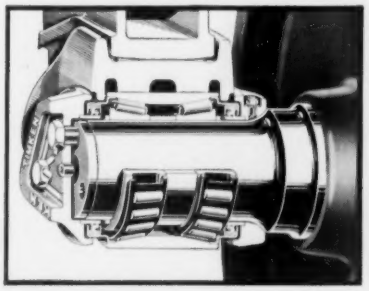
(1) *No lateral movement within the bearing.* Roller bearings are designed to *roll* the load, not slide it. Lateral movement, such as occurs in straight roller bearings, can scuff rollers and races especially when cars are dumped or bumped. As the straight roller bearing and box moves laterally on the journal, the pumping action forces lubricant out of the closure, sucks dirt and water in. And auxiliary thrust devices—which are hard to lubricate with grease and require extra maintenance—are necessary.

In Timken bearings, the taper prevents lateral movement—and the problems it creates. Timken bearings don't pump, don't scuff, don't score. Not only does the hot box problem end—you save on lubricant and maintenance, get longer bearing life.

(2) *Positive roller alignment.* The taper provides the forces which keep the roller ends snug against the rib. This wide-area contact keeps the rollers aligned. Timken bearing rollers can't skew to upset the full line contact and shorten bearing life.

When you switch to roller bearings to end hot boxes and cut costs, remember: Timken is the only journal bearing you can fully count on to end the hot box problem and cut operating and maintenance costs to a minimum—it's the taper! The Timken Roller Bearing Company, Canton 6, Ohio. Canadian address: St. Thomas, Ontario. Cable address: "TIMROSCO".

THE TAPER MAKES
TIMKEN
THE BEARING YOU TRUST



NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST—LOADS OR ANY COMBINATION